# American Aviation American Aviation Sources

The News Magazine of Air Transportation

OCT. 15, 194

### **Pre-Election Fantasy**

AT FIRST blush the order of the Civil Aeronautics Board for an investigation to determine whether National Airlines, Inc., should be dismembered much in the fashion of a fried chicken was far and away the most drastic move made since the CAB's creation ten years ago. Certainly it gave the airline industry a jolt.

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Without doubt there are motivating forces and ramifications which have not yet come to light but it doesn't require much masterminding to discover that nothing much is going to come of the investigation

come of the investigation order for some time to come. Employes can relax. The day has not yet arrived when a sudden CAB decision is going to wipe a permanently-certificated airline off the map overnight.

This is election year. It's been so long since the last major change of administration (16 fast-moving and hectic years) that one is inclined to forget that strange things do happen in that disorganized period leading up to a national election. The Post Office Department has been stumbling all over itself to get its house in lily-white order for the next Congress while the CAB, faced with very ponderous problems created by the present Board's predecessors, has been picking its way through the underbrush trying to find some semblance of daylight ahead.

The Board is in a dilemma over the east coast traffic pattern. Pan American Airways has put up a strong bid and a strong argument for a route connecting its Miami and New York terminals. PAA has waited a long time for a decision on its domestic route applications and is entitled to an answer. Yet even PAA will admit that this is not a very auspicious time for obtaining new routes when the domestic carriers are in poor financial condition.

Certainly by its order investigating National the Board is focusing attention on the complex and often illogical route structures created by its predecessors and is posing a very real question about the amount of competition justified by our economy. There are two carriers now serving Miami-New York. PAA has put in a strong case. By an investigation of the type ordered against National, the CAB effectively postpones a decision during this unfavorable period and opens up for all to see one of the big problems

(Turn to Page 8)



### General Manager of Inland

G. G. (Jerry) Brooder, who recently completed his first year as general manager of the Inland Division of Western Air Lines, is one of the best executives in the airline business. Brooder was one of the organizers of Wyoming Air Service in 1930 and has a broad background of 18 years in commercial aviation. (See story on page 20).

### In This Issue

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**OPFRATIONS** 



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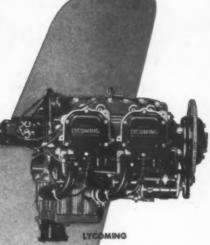
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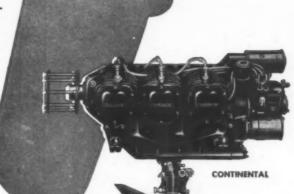


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### AMERICAN AVIATION

The News Magazine of Air Transportation

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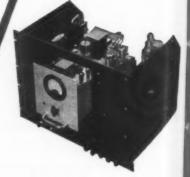
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### BACKGROUND & TRENDS

CAB Shocker: After recovering from first-degree shock of CAB's startling proposal for slicing up National Airlines, seasoned industry observers intimately familiar with Washington maneuverings are adopting a calmer wait and see attitude. Initial impact, however, had upset airlines more than anything else in years. Most anything should be expected in election year, and any final action is long way off. (See page 15).

Uneasy but Divided: While there has been a spirit of uneasiness among some feeder airlines since CAB revealed its intention to terminate Florida Airways' certificate next March, efforts of a few to start organized opposition and collectively fight for Florida's survival have not met with favor from all feeder officials.

Prototype Strategy: Senate aviation leaders are hopeful of pushing a new aircraft prototype bill as No. 1 in the hopper next session. However, some plane manufacturers who formerly supported the bill are prepared to reverse their position and oppose it when introduced. Effort to iron out major differences will be made when Halford Davis, Senate aviation advisor, gets industry people together for legislative conference Oct. 25.

Court Fights: A flurry of court actions seems imminent in effort to compel Veterans Administration to moderate its restrictive attitude toward flight training under the GI Bill of Rights. VA red tape is still giving the run-around to thousands of veterans through tying up of more than 65% of flight training applications because of "insufficient information."

Fuel Saving Potential: Compound engines now being manufactured by Wright Aeronautical Corp. and Pratt & Whitney show that it is possible to reduce fuel consumption on reciprocating engines by 20%. (See page 11). If it were possible to apply this compounding principle to all U. S. scheduled airlines, savings in fuel costs alone would reach \$11,000,000 next year. (Estimates are that the lines will purchase \$55,000,000 worth of fuel in 1949.) Increased range promised as a result of these fuel savings would permit a sharp upturn is completed trans-Atlantic schedules by making it possible to by-pass Gander, Newfoundland, which has been a staging point for many cancellations.

Lower Loss: Domestic airline industry's operating loss for 1948, though substantial, should be considerably less than \$21 million mark of 1947. Incomplete figures available indicate an approximate \$12 million deficit through July, compared with \$16.8 million for same period a year ago.

Modest Profits: Substantial military orders and previous absorption of major losses due to development of commercial transports should make 1948 a modestly profitable year for the manufacturing industry as a whole. Military shipments should pass the \$1 billion mark for first time since war, compared with about \$750,000,000 last year.

Lightplanes 50% Down: Production of personal aircraft is running about 50% below 1947 total of 15,515. Shipments through August amounted to 5,486, and total for year should reach between 7,000-8,000. Four-place units represent 47% of 1948 output, compared with 38% a year ago and only 7% in 1946, reflecting shift in emphasis from training to business uses.

Commuter Lesson: Commuter fares which West Coast Airlines introduced last February are being dropped because of insufficient new business generated.

There was customer reluctance to pay full price of a six-ticket book at one time, even though some eventually made separate purchases of an equivalent amount of transportation within the 30-day limit. One West Coast view is that the plan was premature and might be tried later when carrier's traffic potential is more fully developed. No tax exemption was provided with the ticket books.

Competition for Rail: Behind Capital Airlines' 4c-amile "Sky-coach" service between New York and Chicago lies this fact: there are three all-coach trains daily N. Y.-Chicago, furnishing 1,322 seats, and company strongly feels it should be able to capture enough passengers from this potential to make its 59-seat operation pay.

**Excursion Boom:** The reduced round-trip excursion fares which 10 trans-Atlantic airlines put into effect on Oct. 1 have brought good public response and big increases in October reservations, as compared with a year ago. On at least one airline, nearly 70% of October passengers booked were taking advantage of the 30-day excursion rate. Early bookings were also heavy on Pan American Airways' new \$75 tourist service to Puerto Rico.

Luxury Demand Also: Westbound flights of TWA's all-sleeper trans-Atlantic flight are booked to capacity through October. This is only all-sleeper trans-Atlantic service now operated by a U. S. carrier, but Air France, which has been operating an all-sleeper known as the "Golden Comet", reports that the New York-Paris demand has more than justified the addition of a second weekly flight.

Fare Favors DC-6: Load factor for American Airlines' DC-6's has moved from below to above system average since the company eliminated extra fare on the plane. AA officials also report that about 10% of reservations being received are under new family-plan and that early part of the week load factors have "increased considerably."

**DC-4M Changes:** A list of 300 modifications requiring 10,000 man-hours per plane will be made this fall in Trans-Canada Air Lines' fleet of DC-4M North Star transports. The changes will be made without any interruption of service.

Talking Markers: "Talking fan" markers are likely to be pushed by ATA and meet with more ready acceptance within CAA because of recent CAB findings in Eastern Air Lines' accident at Oxon Hill, Md. The "talking fan marker" would eliminate possibility of mistaken identity which exists with present coded systems.

Placard Relief: Airline pilots may get some relief from the multitude of cockpit placards confronting them daily. ATA has submitted a list of cockpit placards to CAA which it is felt could be eliminated without affecting safe airplane operation. These include 14 on the DC-3, 30 on the DC-4, 7 on the DC-6, 3 on the Martin 2-0-2, 2 on the Boeing 307, 11 on the Constellation, and 18 on the Convair-Liner. CAA is reviewing the idea.

**500-Ft. Takeoff:** Installation of the new Wright R-1820-76 engine in the Air Force C-125 Raider—now being considered by Northrop engineers—would permit normal takeoff run of only 500 feet and landing run of 330 feet.

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### EDITORIAL

CONTINUED FROM PAGE 1

facing the industry today—uneconomic competition. Where two routes can be justified, three might well be ruinous.

The patient (competitive route structures) has painful internal disorders. Rather than perform the operation alone, the CAB apparently proposes to cut open the patient and let everybody in on a consultation basis to squabble about what to do after the internal disorder has been fully examined. If the patient dies, others will share responsibility. On the other hand the internal disorder may be nothing but

an accumulation of gas.

There is reason to believe, too, that the pilot strike has been a contributing factor. The ALPA president, Dave Behncke, has used everything in his power to bring about a voiding of National's certificate. First there were efforts made before the CAB, all of which failed. More recently there was a visit to the White House of the A. F. of L. leader, William Green, and Washington reports insist that he was there to request White House action of some sort against National. There seem to be good grounds for belief that John Steelman, the White House labor aide, asked the CAB (or at least its chairman) to do something.

There is a question at this point, however, whether the CAB investigatory order against National is what Behncke wanted. It would seem more logical that the CAB, faced with pressures for various actions, took the simplest way out during this national election period to set up an investigation. If the CAB wanted to "threaten" National, without going any farther, the order serves the purpose neatly. What the CAB has done, in point of fact, is to throw over to the new administration next year the policy solution to several problems. In the meantime the order might prod National into merging which, the Board reasons, would alleviate several pressures.

It was natural that the newspapers tied the National investigation into the much-publicized financial crisis of the airlines. But as far as mail pay is concerned it is interesting to note that National is

not out of line in the slightest.

Prior to the CAB order of July, 1947, granting a mail pay increase, National was receiving about 2.8¢ per mile which was substantially below the industry average and far below a subsidy category. The new 1947 rate called for a 131/2¢ a mile rate for the remainder of 1947, and a 101/2¢ a mile rate beginning in January of this year. As of today National is getting about half the mail pay awarded to airlines of its class. If it were on a par with those of its class, it would probably have no financial troubles at all. It has applied for additional pay, but its requests are less than that being asked by some of the trunk carriers. It would be difficult to tag National with mail pay requirements in excess of other airlines of like or larger size. Any discussion of mail pay is subterfuge. The basic argument is elsewhere.

The manner in which CAB handled the National order was quite unfortunate. The impression was given out that the order was leading up to something decisive at an early date and that the CAB had full power to parcel out airlines at will. The truth

is that even the CAB is dubious about its full powers in this regard. It is entering an untested legal contest of the type that ordinarily can't be settled without high court action consuming months or years of time. It is perhaps significant that CAB members have admitted privately that they don't believe the Board has the legal authority to dismember an airline.

And there is still another factor to be considered. If the CAB were a stable body, composed of men who were going to remain for a long period of time, it could initiate and follow through to conclusion many broad-scale actions even where the Board powers were in doubt. But the CAB is, in fact, a procession of men with a record of inconsistency and fluidity of policy that is startling in retrospect. In ten years the CAB has wavered from one extreme to another. In view of this record, a really far-reaching positive action could hardly be expected a few months before the nation has its first major political change in 16 years.

The most unfortunate effect of the CAB order against National is in financial circles. If a route certificate can be chopped up or dissolved by the whim of a government agency, an airline becomes a very poor financial risk indeed. Capital will shy away in bulk. The CAB order did much to harm the standing of the air transport industry in investment circles. Stability and a fair amount of security are essential to a healthy industry.

Nonetheless, this is election year. Anything can and does happen. The confusion merely gets a little more disorderly.

### **Baggage Handling**

TWO AIRLINES deserve orchids for simplifying procedures for handling passenger baggage. Hawaiian Airlines has gone the full limit by eliminating baggage checks altogether. A colored tag denoting only the destination is placed on each bag and passengers pick up their own bags after they have been unloaded. This system, while not workable on transcontinental routes, is excellent for a small carrier such as Hawaiian.

West Coast Airlines, the feeder tucked away in the far northwest (and doing an excellent job), has gone mid-way in eliminating baggage checks. The passenger receives no check, but a tag giving the name of the passenger, his flight number and his destination, is placed on each bag. At destinations the passengers pick out their own bags. This system is working well and seems to expedite baggage handling.

### Addendum

IN THE editorial last issue on government delegates traveling to a European conference by boat, Bob Hoyt, of the CAB, an official delegate, inadvertently was not mentioned. He not only flew both ways but took his wife along. This brings to four the number who flew both ways.

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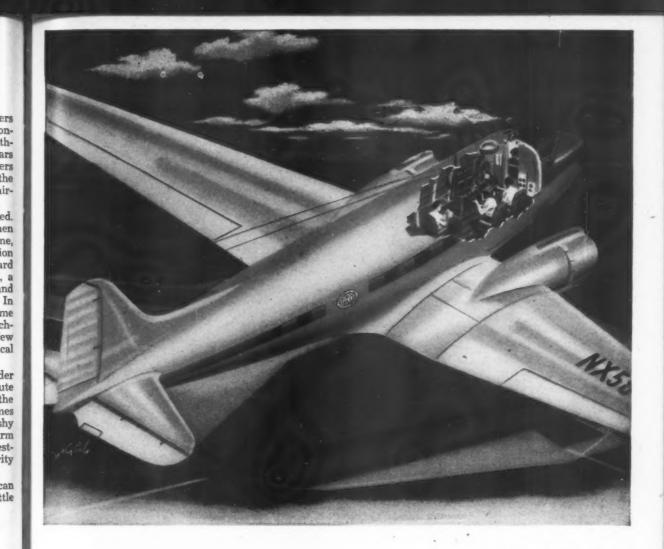
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AMERICAN AVIATION

Competition for Jets:

### 20% Fuel Saving Offered By New Compound Engines

By WILLIAM D. PERREAULT

While many in the aviation industry have been off guard watching the accomplishments in the turbo-prop, jet and rocket power, the manufacturers of reciprocating engines have moved ahead with developments which will revolutionize present day concepts of engine power available from this type power-

Of prime importance is fact that the advantages of the new development, the compounded engine, will be available on at least one present day commercial transport in the near future without major modification of aircraft.

The extent of this development and the importance it is playing in the newest type military aircraft is emphasized by the Navy's announcement of a \$32,000,000 contract with Wright Aeronautical Corp. for an undisclosed quantity of the Wright Turbo Cyclone 18 engines. Although unannounced until last week, Pratt & Whitney was known to be working under a parallel contract for the 28 cylinder 4360 VDT engine for the Air Force. Likelihood is that this contract calls for at least 250 engines since they will be installed in the B-54 for which orders have already been placed.

The fact that compounding the Wright Cyclone 18 used in the Constellation has boosted take-off horsepower from 2500 to 3250, and the Pratt & Whitney 4360 VDT engine from 3500 to 4000 horsepower, would seem in itself a major accomplishment but it is paralleled by another near miracle. Fuel consumption has been dropped from approximately .48 to .38 pound per brake horsepower per hour. Brake horsepower is the power actually delivered to the propeller.

If the operator finds it advisable to maintain the same horsepower formerly used, he can gain a 20% increase in airplane range, or should he prefer to use the additional power and gain increased speeds, without increase in fuel consumption, he will be rewarded with higher block-to-block speeds and consequent increase in passenger miles per airplane per day. These factors are money in the bank.

During 1947 the airlines spent \$35,-000,000 on the purchase of fuel. With the application of the compound engine to all airline transports this figure could have been reduced by 20%, approximately a \$7,000,000 cut in fuel costs for the industry. This is equivalent to onethird of the total airline losses during

Commercial Advantages. Both the Wright Aeronautical Corp. and the Pratt & Whitney Aircraft compounded engines offer tremendous advantages to the operator. The Wright engine is more apt to see commercial service first because it requires a minimum of aircraft modification to adapt it to a present day transport airplane. This possibility has been studied by Lockheed Aircraft Corp. with the results that a set of figures have been drawn up on what this would do for the Constellation.

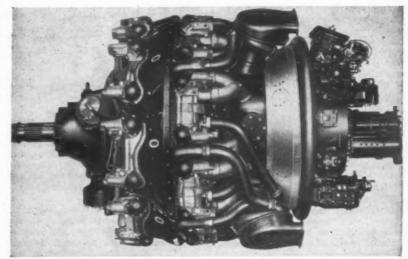
Lockheed's proposed 849 transport, a cargo type Constellation equipped with the Wright C18C11 engine (commercial designation of the Turbo Cyclone 18), would have a take-off weight of 110,000 pounds as compared to 95,000 pounds for the L-49 series and 102,000 for the widely acclaimed "new type Constella-With a full load of fuel, 5820 gallons, maximum range of this transport would be 5600 miles, or assuming a lower fuel load with consequent payload increase, a 3590 mile range with 4000 gallons of fuel.

Similarly, the speed of the 849, cruising at 20,000 feet altitude after take-off at 110,000 pounds gross weight, would be 321 miles per hour. These gains in airspeed and payload, or the decrease in fuel costs, could well bring the airlin operators of the Connie over the top of their financial difficulties.

Present indications are that the first application of the Pratt & Whitney VDT engine will be in the Boeing Stratocruiser although this has not been officially stated by the manufacturer. Boeing is presently working on the B-54, a B-50 type bomber powered by the VDT engine. Operational characteristics of the engine indicate that the ceiling of the airplane will be well over 50,000 feet as a result of P&W's unique adaptation of the compounding principle.

Background. A logical question is prompted as to where this engine came from and why we have not heard more of its development. The answer is interesting because it covers a few of the principles involved. It has long been realized that some 50% of the thermal efficiency of the engine was lost out of the exhaust stack in the precision cycling necessary to insure present day engine performance.

During the war, engine manufacturers harnessed this otherwise waste energy to drive a turbo-supercharging assembly. This unit used the principle of the watermill with the exhaust gases driving



This rear view of the new Wright Turbo Cyclone 18 engine Power Mushrooms-"gives a particularly good view of the manner in which exhaust gases are routed into the three turbines which pass the resultant power back to the cranksheft for increased horsepower, fuel savings and longer ranges. Compounded power for the Navy's P2V could increase its range from 11,236 miles to 13,483.

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the wheel or turbine. The other end of the turbine shaft drove an impeller (air pump) which supplied sufficient air to the induction system for burning at altitudes considerably above the service ceilings of earlier engines.

After the war, under the veil of military security, plans for use of this principle in recovering lost power were speeded up. Both Pratt & Whitney and Wright approached the same goal but from different directions.

Wright Aeronautical developed an engine in which three miniature "blow down" turbines (see cut) were mounted on the outer casing of the engine aft of the cylinders. Exhaust gases from six cylinders drove each of the individual turbines. The torque generated by the turbines is then transmitted via quill type drives and gearing to the crankshaft adding to the normal power made available by the routine channels.

This design is particularly advantageous in that it does not require additional controls in the cockpit and the minor change in the engine's physical size makes it possible to adapt it to the airplane without major modification. The engine is slightly longer and the nacelle of the Connie needs some rework but this is very minor in nature. Otherwise the only change is in adopting triple exhaust channels for the gases from the individual turbine units.

Supercharger Out. On the other hand, Pratt & Whitney decided to eliminate completely the engine driven supercharger which was known to absorb 500 horsepower in the 4360 engine. This power was developed in the engine but lost in driving the supercharger. Using the turbo-supercharger principle, but improving on the basic design, a separate supercharging assembly was designed.

Isolated from the engine, this unit incorporates the turbine driven by engine exhaust gases to drive an impeller which sucks the air into the housing and pumps it through coolers to the engine proper. Direct injection fuel pumps simplify the distribution problem which would otherwise result from lack of the engine impeller.

The capacity of this assembly is considerably higher than the engine driven unit formerly used. For this reason the supercharger speed and capacity is limited at sea level by dumping some of the exhaust gases overboard via a waste gate. Not until the airplane reaches 45,000 feet is the maximum capacity of the supercharger realized.

We can expect to see other manufacturers adopt these principles and the present manufacturers expand the application to other models before many months have passed. The one thing that is certain is that the reciprocating engine is here to stay for some time. Although they may be joined by jet engines in the near future, they will provide serious competition for a place in 500 mph transports of tomorrow.

# CAB Flight Engineer Ruling to Cost \$20 Million in '49

With the exception of the grounding of the DC-6 in November of 1947, the flight engineer ruling reaffirmed by the Civil Aeronautics Board on Oct. 5 is the most serious problem with which the DC-6 operators have been confronted. The ruling was dissented to by Board member Josh Lee.

Airline officials have stated that it will cost \$20,000,000 during the first year of operation with recurring costs amounting to \$10,000,000 per year.

The CAB stated that "in establishing basic criteria for requiring a third crew member in the person of an airman holding a flight engineer certificate, the Board does not intend this to be a standard for future design of aircraft but a means of identifying existing aircraft requiring flight engineers."

Other than specifying that the ruling only applies to four-engine aircraft, the regulation remains much the same as originally issued. The use of the 80,000 pounds weight criteron for determining aircraft complexity, which the airlines so vigorously opposed, remained in the regulation with the possibility that the DC-4 powered by the P&W 2180 engine would come within the ruling if the airlines adopt this new powerplant. With the 2180 engine the DC-4 would be rated for 80,600 pounds gross take off weight.

This may well deter the airlines from adopting the much improved engine.

In stating that "the flight engineer is able to perform important duties and add to the safety of flight even when riding in the jump seat of a plane in which no flight engineer station has been provided," the Board passed over the discussion as to the interpretation of the earlier ruling which did not indicate whether or not a station would be required.

Jump Seat Problems. This, however, creates a new problem for the airlines affected in that this position, the jump seat, has always been used by the check pilot, CAA flight agent and other supervisory personnel in checking cockpit operations and procedures. Other than standing in the aisle behind the crew members there is no alternate position for this acknowledgedly important function.

The most serious problem facing the airlines as an immediate result of this ruling is the procurement and training of a sufficient number of men to meet the Dec. 1 deadline. It appears that the DC-6 operators will require between 250-300 men to fill the flight engineer quotas. During the war years the airlines used mechanical personnel in the flight engineering positions. This set a

precedent which most of the mechanic unions took into consideration in formulating their postwar contracts. Almost every airline has some stipulation in the mechanics' agreement relative to posting all bids for flight engineers, thus making them available to mechanic personnel. fillir

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In this light it is important to note that bids may be posted but the qualifications may be set so high as to eliminate all but those having a predetermined level of flight time as pilots or any parallel set of qualifications which the airline finds desirable. This will meet with the basic contract requirements without granting the positions to mechanical personnel and thus losing them in their skilled trades.

United Air Lines program which was inaugurated two months ago set up standards which require piloting experience. The standards closely paralleled those for first officers with equipment training and flight engineer certificates being gained during the four months training course at Cheyenne and San Francisco.

Protest Filed. Already the Flight Engineers Association, representing employees of UAL, has filed a protest with the National Mediation Board citing the company's use of pilots in the flight engineering position as being contrary to union agreements. The wording of CAR part 35 dealing with flight engineer qualifications is apt to defeat this contention since there are three non-mechanical types of personnel who qualify under the rules.

Whether or not the airlines care to use mechanics in the flight engineer position will be strongly influenced by the difficulty which the airlines would have in replacing the mechanics accepting the positions. As in other flight positions, pay for flight engineers in the industry is relatively high, and all but a few of the senior maintenance men would find it generally desirable to join this group.

The effect of taking 300 of the top maintenance men out of the production jobs would be most critical in all the airlines. The union's bid system would insure that the jobs went to senior men and not inexperienced ones. Flight engineer positions might well be filled by men with lesser equipment knowledge who could receive special training on the airplane in which they are to fly, if this union problem did not exist.

The Board's clarification of the ruling that a flight engineer, when required, shall not be assigned other duties at the same time for which an airman rating is necessary will increase the possibility

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of the airlines turning to mechanics for filling vacancies.

The complexity of the DC-6 indicates that it will be necessary for the airlines to spend more than the interim between now and Dec. 1 to train adequately flight engineers. The CAB has been pressing this matter for some time. It was almost two months ago that CAB sent a letter to the operators of the DC-6 reiterating that the flight engineer ruling was still in existence and seeking information as to what they were doing about procurement and training of personnel. The answers to these inquiries were never made public but there is every indication that the airlines pointed to the impossibility of intelligent action until a more concrete decision was reached.

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Now it appears that CAB expects the airlines to meet the deadline date or show cause why not. Under the conditions mentioned above it will be interesting to see if the time element will be recognized as a valid cause for noncompliance. The original ruling was issued on April 14, six months ago.

Claims in the CAB release that the CAB and CAA were "engaged in scientific study of the problem to determine the precise criteria to evaluate the necessary flight crew complement for large transport aircraft" caused considerable interest in the industry. Investigation revealed that no such studies are in process at the present time.

Indications are that the CAA will conduct some tests along these lines at the Indianapolis training center and if funds are made available the CAB may call upon an agency outside the government to make a study of the crew maning problem. Otherwise the "scientific study" will consist of using information obtained at Wright Field.

It now appears that the studies now under way by the Flight Safety Foundation and the actual operating experience of the airlines will have to be depended on for future evaluation of the wisdom of the flight engineer requirement.

-FARES-

### TWA Cuts DC-3 Fares

Trans World Airline has asked CAB permission to put into effect from Nov. 1 through May 1 a 15% reduction on DC-2 round-trip schedules as a means of qualizing its rate structure and "broadening the base" of its market.

In addition, TWA will join American Airlines and others in instituting a family-fore plan applicable on domestic servings on Mondays, Tuesdays and Wednesdays. The 15% round-trip DC-3 reduction will not apply on such flights.

Under the proposed tariffs, TWA will offer domestic service in three pocket-book ranges: the twin-engined flights for the thrifty; four-engined Stratoliner service at regular fares; and luxury Constellation services at regular fare plus surcharge.



Time Out—cials attended Eastern Air Lines' five-day field and advisory board of directors meeting in Miami, Fla., late last month to observe the system of management which gives 250 EAL officials a direct voice in running the company. Shown above, during a brief recess, are CAB Chairman Joseph J. O'Connell, EAL President Eddie Rickenbacker, and John R. Alison, Assistant Secretary of Commerce for Air.

TWA operates 84 flights daily with its fleet of 65 DC-3's, and is reported to be carrying more than 50% of its passenger traffic on the twin-engined transports.

### Capital's 4c Rate

When Pan American Airways put its coach-type, reduced-rate Puerto Rican service into operation Sept. 24, it was almost an inevitability that some of the domestic carriers would adopt the new concept of second-class air service. Capital Airlines was the first under the wire.

A tariff filed by Capital Sept. 28, to become effective Oct. 15, called for a "sky-coach" service between New York, Pittsburgh and Chicago, at fares 35% below regular air fare and Pullman fare and approximately at the level of rail coach. The rate would be 4c a mile, amounting to \$29.60 plus tax from New York to Chicago, against rail coach fare of \$27.30 and Pullman and regular air fares of \$44.10 each.

One round-trip daily, an aftermidnight service, would be operated at this reduced rate. J. H. "Slim" Carmichael, Capital's president, said the 4c fare would be made possible by "elimination of much-publicized frills, and the full employment of personnel and utilization of equipment." Six 59-passenger DC-4's would be used on the route, and there would be only one cabin attendant and no meal service. Departures would be after midnight with arrivals before breakfast time.

No Reservations. Reservations will not be accepted for this flight, to be called the Nighthawk. The only way to get on is to buy a ticket at Capital's New York, Pittsburgh or Chicago offices. There will be no discount on roundtrips, and space requests from connecting carriers will not be accepted.

As to the revenue outlook, Carmichael said Capital should be able to show a profit on the service with a 50% passenger load factor. Costs should not exceed \$1.40 per mile, he pointed out, while a 50% passenger load factor would yield \$1.57 in revenues as follows: passengers, \$1.12; mail, about 15c per mile, and express and freight, about 30c a mile.

With an 80% load factor, which he predicted would be attained "within a matter of weeks," total income would reach \$2.25 a mile.

### **EAL Ups Fares, Too**

Eastern Air Lines, after several weeks of indecision, came out last week with the announcement that it would raise its fares to the 6c-a-mile level on Oct. 15, with a 5% discount on round-trips. The differential on Constellation flights will be retained by Eastern, as it has been retained by TWA.

Eastern had originally planned to go along with the other airlines in boosting fares about 10% and offering a 5% round-trip reduction, but it suddenly changed its policy on Sept. 16 and announced that it was postponing indefinitely any increase in passenger fares.

EAL's decision this month to boost fares probably was influenced by the favorable load factors TWA has enjoyed on its extra-fare Constellation flights, and by the fact that the recent fare raises apparently had not hurt traffic.

### Family Plan Spreads

American Airlines' first-of-the-week family-fare plan reportedly was proving to be a traffic stimulant as news of its economy possibilities got around. It looked so good, in fact, that other airlines were moved to adopt similar plans.

National Airlines filed with CAB a family travel plan similar to American's to become effective Oct. 15, if approved. The plan would be effective for travel starting at any time between midnight Sunday and midnight Wednesday.

Piedmont Airlines asked permission to file on less than statutory notice a plan similar to American's, and Southwest Airways requested the same permission. Northeast Airlines already had gained approval of a family-fare plan, to be initiated Oct. 20, to apply on all flights except those departing between Friday noon and Monday noon. TWA was also joining the family-fare group.

As in American's plan, the plans of the other carriers provide for half-fare transportation for any adult member of the immediate family of a 'full-fare passenger, as well as all children 21 years of age or under.

Also, TWA's group travel plan had stirred interest among other airlines, and at least one other carrier, Mid-Continent, had filed a group travel tariff providing 20% fare reductions for parties of 10 or more persons.

### Commuter Fare Fiasco

It had seemed almost too good to be true when the Bureau of Internal Revenue several weeks ago informed Mid-Continent Airlines that passenger travel of two or more trips a month between a given pair of points would be considered commutation and accordingly would be exempt from the 15% Federal transportation tax, but MCA took the Bureau at its word and filed commuter tariffs based on the tax exemption feature. Other carriers planned to follow suit. Then came disillusionment.

On Sept. 30, it was disclosed that the Revenue Bureau had done a flip-flop, revoking the previous ruling given to Mid-Continent and terming it an unfortunate mistake. Also disapproved were requests filed by National Airlines and United Air Lines for approval of commuter fares on a basis similar to that of MCA.

These actions naturally left the commuter tariff situation very much up in the air, and Internal Revenue promised to try and bring order out of chaos by preparing a clear definition of "commutation." Until such a definition were available, though, there could be no action on airline requests for approval of tax-exempt commuter fares, it was indicated.

Opinions Wanted: M. F. Snider, head of the Miscellaneous Division of the Bureau's Transportation Branch, said opinions would be solicited from competent parties in all fields of transportation to be used in defining commutation.

He said he thought the number of monthly round-trips would probably be the important factor in the decision but inferred that the Bureau was not altogether satisfied with the round-trip air fare reductions that had been filed under the first commuter plans. Moreover, he said, he had no idea what the minimum number of monthly trips decided eventually would be, but he pointed out that the standard commuter tickets now sold by railroads call for 60 trips monthly on a business basis or 46 trips for school transportation.

Section 3469 (b) of the revenue code, under which Mid-Continent's commutation tickets had originally been exempted from the transportation tax states: ". . . The tax imposed shall not apply to amounts paid for transportation which do not exceed 35 cents, to amounts paid for commutation or season tickets for single trips of less than 30 miles, or to amounts paid for commutation tickets for one month or less."

Under the last clause, an airline selling a book of tickets at reduced rates for several round-trip flights between specific pairs of points within a 30-day period apparently meets the conditions for tax exemption. The only question is one of interpretation of language. What is "commutation?" That's what Internal Revenue now is trying to find



Franklin Medal Winner Dr. Theodore von Karman, chairman of

the Scientific Advisory Board of the U. S. Air Force and director of the Guggenheim Aeronautics Laboratory, has been awarded the Franklin Medal for "outstanding engineering and mathe-matical achievements, particularly those relating to the development of advance aerodynamic conceptions which have directly influenced the progress of aeronautical design."

#### Airlines Hold to ATC

Performance of the airline-controlled Airlines Terminal Corp. had been far from outstanding, and there were some who thought the stockholders would welcome a good chance to get out from under. But when opportunity came, a fortnight ago, the offer of S. J. Solomon and R. C. Phillips to buy a controlling stock interest in the ATC was turned down.

The vote to reject the purchase offer was reported to be "almost unanimous," the consensus being that the corporation should remain in the hands of the airlines, with the latter making every effort to "make it work" better than it had in the past.

The corporation will seek to negotiate contracts with municipalities under which it would operate airports in the "landlord" capacity, seeking to develop revenues that would meet the needs of the municipalities while at the same time holding charges to the airlines at as equitable a figure as possible.

### 'Hot' Topics for Clinic

Some of the most controversial issues in aviation today, including several with direct bearing on air transportation, have been cleared to be debated and voted upon at the National Aviation Clinic in Detroit next week-Oct. 17-21.

Between 50 and 75 policy bills approved in advance by the Rules Committee will be on the agenda of the Clinic, which again will be conducted on the plan of the unicameral legislature, with all delegates given an opportunity to debate and vote on the bills.

#### CAB CALENDAR-

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Oct. 18-Enforcement proceeding against Standard Air Lines, Inc. (Docket 3357). Tentative.

Oct. 18-Oral argument in the "Skycruise" Case (Resort Airlines, Inc., and American Air Export and Import Company (AAXICO). (Docket 2377 et al.) 10 e 5042, Commerce Building. 10 a. m., e.s.t., Room

Oct. 25—Hearing on applications proposing additional U. S.-Alaska Service. (Dockst 3286 et al.) Examiner William F. Cusick.

### **Aviation Calendar**

Oct. 17-21-National Aviation Clinic.

Oct. 17—Air Age Exhibition (static show), Lambert-St. Louis Municipal

18-23-American Society of Travel Agents convention, Savannah,

Oct. 18--Personal Aircraft Council meeting, Detroit.
Oct. 20-21—Air Transport Section,

National Safety Council, Hotel Chicago. Stevens.

Oct. 22-23-Fourth annual Arisons Aviation Conference, Prescott. Oct. 22-24—Idaho Flying Farmers

Oct. 25-26—Third Annual Indiana Aviation Conference, Purdue University, Lafayette, Ind. (Sponsored by Purdue School of Aeronautics, Indiana Aviation Trades Association, In-

diana Aeronautics Commission).

Nov. 7-13—Flight Safety Foundation course on aircraft accident investigation, Woods Hole, Mass.

Nov. 14-15—Network Augustican

Nov. 15-17-National Aviation Association, annual meeting, Hotel Allerton, Cleveland, with joint meetings and trade show with ADMA.

Nov. 15-17—Aviation Distributors Aviation

Nov. 15-17—Aviation Distributors and Manufacturers Assn., annual meeting, Hotel Statler, Cleveland. Nov. 16-18—National Association of Travel Officials annual convention, Miami Beach, Fla.; Robert Richter Hotel.

Dec. 2-5—Fourth annual Interna-tional Aviation Celebration, El Paso. Dec. 17—Annual Wright Brothers Lecture, Institute of the Aeronautical Sciences, at U. S. Chamber of Com-

merce, Washington, D. C. Jan. 5—Florida Flying Club 14th annual reunion, bourne, Fla.

Jan. 10-14—SAE Annual Meeting and Engineering Display, Hotel Book-Cadillac, Detroit.

April 3-6-American Association of Airport Executives annual meeting. Oklahoma City.
April 11-13—SAE National

nautic & Air Transport meeting. Hotel New Yorker, N. Y. July 3-4—Southern California In-ternational Air Races, Long Beach.

#### International

Nov. 9-ICAO Operations Division. Montreal.

Nov. 16-ICAO Airworthiness Division. Montreal.

Nov. 23-ICAO Southeast Asia Regional Air Navigation meeting, New

Feb. 8-ICAO Operations Division. (Site not selected).

Feb. 22—ICAO Airworthiness Division. (Site not selected).

### CAB's Plan to Liquidate National Startles Industry

By DANIEL S. WENTZ II

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CAB provided the air transport industry with a major shocker late last month by proposing to cut up National Airlines and peddle the parts to three or more other airlines.

Pan American Airways looked like the biggest beneficiary; it was lined up for the New York-Miami route. Delta was mentioned as a likely purchaser for NAL's Route 39—New Orleans-Miami and New Orleans-Jacksonville. The Board thought either Eastern or Delta might be a good candidate for National's Havana route. And it suggested "an appropriate carrier" might acquire NAL's local services inside Florida.

The move was completely unprecedented in CAB's 10-year history. Apparently it came as a complete surprise to all companies directly concerned. While it is undoubtedly true the consummation of such a plan is probably very far in the future, its background and immediate impact on the industry can be assessed.

What CAB actually did was nothing more than open an investigation. This investigation will look into "whether the encouragement and development of an air transportation system properly adapted to the present and future needs of the United States and the fostering of sound economic conditions in such air transportation system would not be furthered by the transfers, upon just and reasonable terms and conditions, of the authorizations and equipment and other property of National Airlines."

This was the language used in its official order. In a press release, CAB said the investigation "is in furtherance of the Board's study of the air transportation system, and is consistent with recommendations made earlier this year by the President's Air Policy Commission and the Congressional Air Policy Board."

Lacks Power. The plan set forth in the order of investigation is actually noting more than a target proposal. Responsible CAB sources have stated that the Board does not have the power to the directly any route transfers of the find proposed. Thus the outcome of the investigation can hardly be more than a series of recommendations.

However, if the recommendations bear out the proposals already made, CAB can consider at that time what legal powers it may use to put them into effect and whether the use of such power as it may have would be desirable from a policy standpoint. But this is probably a long way off. Indeed,

some CAB sources say frankly they don't believe a hearing will ever be held on the investigation, to say nothing of any final action later on.

On the other hand, there are those who feel that if CAB does push the case to a conclusion, it could find ways "National Airlines' management will continue to provide dependable service to the public and to protect the interests of the investors in its securities. The company believes that subjecting the industry to such proceedings will destroy the ability of the airlines to raise capital and to negotiate with labor in enforcing safety requirements. . . .

"The Board's present action is amazing in view of the fact that this same Board only seven months ago extended National's routes to include Washington, Baltimore and Richmond. National

has consistently been one of the country's low-cost, profitable operators and its capital position today is superior to many other airlines."

C. E. Woolman, president of Delta which was named by CAB as a potential customer for a chunk of NAL, said that "if the purport of the Board's order looks toward the enforced dismemberment of National Airlines it would seem such action, if legal, should be taken only after an airline has had its day in court and been proven unfit to carry on operations and that the public was suffering thereby. Such action would definitely have a serious deterring effect on any future airline industry." any form and would destroy the wavering

airline industry."
Pan American's official position was "No comment." Eastern likewise said nothing. One airline executive expressed industry would units

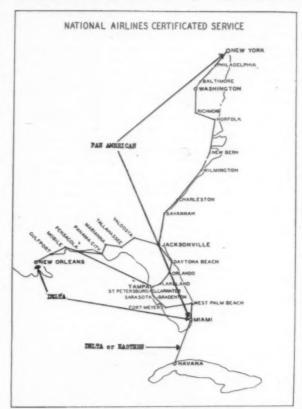
confidence of many

of today's stock-

holders in America's

the hope that the industry would unite to fight the proposed dismemberment of National. He stressed that the permanence of all certificates of convenience and necessity would be placed under a shadow by the Board's proposal. Then, too, there were some who viewed the proposal as a constructive step toward re-laying the foundations of the domestic route pattern and a move away from new route grants.

Gov. Millard S. Caldwell of Florida telegraphed to CAB a strong protest



Proposed Liquidation—Here's how National Airlines would be dismembered and its routes distributed under CAB's proposal for liquidation:
(1) Pan Am would acquire the New York-Newark-Miami route, except for intermediate points between Jacksonville and Miami;
(2) Delta would acquire New Orleans-Jacksonville and New Orleans-Miami;
(3) Eastern or Delta would acquire Miami-Havana;
(4) "an appropriate air carrier" would get local authorizations between Jacksonville and Miami.

and means, either directly or indirectly, of dismembering National if it wanted to. But behind any action CAB might take always stands an appeal to the Federal Courts, and months or even years could well pass before a final answer could be handed down.

Reaction. George T. Baker, president of National, made it plain that he would not submit meekly to any such drastic surgery. "The action taken by the CAB is unprecedented," he said in a public statement.

against any dissolution of National "for the benefit of outside competitors." Some sources felt that the strong recommendations made by the Presidential and Congressional air policy groups urging revision of the domestic route pattern were the mainspring of CAB's action. If so, they argued, other similar proposals affecting other airlines might be forthcoming, and National was selected as the first only because a start had to be made somewhere.

Background. In the background there are a number of factors which may have entered into consideration more or less strongly. Among them are: (1) the Air Line Pilots Association strike against National which has been going on since last February 3;

(2) National's current financial position as shown by reported losses of over \$2,000,000 for the year ended March 31 and recent petitions for in-

creased mail pay;

(3) current unfavorable load factors

being reported by National;

(4) a proceeding brought against NAL by ALPA seeking revocation of the airline's certificate for alleged Railway Labor Act violations (this case is currently awaiting Board decision on a jurisdictional issue);

(5) a decision by a Presidential Fact Finding Board that National had violated the Railway Labor Act in its

negotiations with employees.

CAB has also been aware of recent merger talks between National and Delta. These negotiations were quiet recently but are far from dead. sons connected with them have been hoping that a solution could be worked out in the not-too-distant future. Some observers felt that CAB's cut-it-upand-sell-it proposal might kill these merger talks at once. But others pointed out that the Board's action might give both companies the push needed to bring a merger to completion. Two days after CAB announced its plan, NAL stockholders, meeting in Miami, re-elected the company's entire slate of officers in complete vote of confidence in the management.

The New York Times reported that ALPA strikers picketing National's office in the Airlines Terminal Building were "among those most surprised" by CAB's order. It added that some of the strikers expressed the view that if National's system were parcelled out among other airlines, the acquiring carriers would be bound to rehire the strikers as the "existing" employees of National. They suggested, according to the Times, that ALPA members flying for the acquiring airlines might strike if this were

not done.

Bolivia Air Pact: U. S. and Bolivia signed an air transport agreement on Sept. 29, raising to 36 the number of "Bermuda-type" bilateral pacts to which the U. S. is a party.

### PAA Gets New Route Seattle-Portland to Hawaii

A fortnight ago the Pacific Northwest-Hawaii Service Case was generally thought to be history, except for actual implementation of the certificate awarded to Northwest Airlines, and NWA was getting set to run its first survey flight and set up a training course for pilots chosen to fly the new route. Then from the White House came a bombshell.

The Civil Aeronautics Board announced Oct. 4 that, pursuant to a directive from President Harry S. Truman, it had issued a supplemental opinion and order in the case awarding a five-year temporary certificate authorizing Pan American Airways to operate scheduled services between the coterminals Seattle and Portland and Honolulu, A restriction prohibits Seattle-Honolulu shuttle service.

The President had concluded, the order stated, "that in addition to the service authorized to be rendered by Northwest Airlines, Inc., the national security and the public welfare require the establishment of the most direct and expeditious service possible between the Northwest and points on the existing services of Pan American Airways, Inc., in the South Pacific, the Philippines, Japan and other points in the Orient served by that company."

Truman Reversal. Only nine weeks previous, Truman had approved the CAB decision authorizing Northwest to operate between the co-terminals Seattle-Tacoma and Portland and Honolulu. He had at first been inclined to order CAB to dismiss all applications for the proposed route, but then had reconsidered and had gone along with the 2-to-1 decision of the Board awarding the route to NWA.

In giving a supplemental award to Pan American, presumably on his own initiative and without the enthusiastic concurrence of some CAB members, the President had followed some of the reasoning Vice Chairman Oswald Ryan had used in his dissent to the original decision

Favoring Pan American over Northwest, Ryan's dissent stressed the advantages of giving PAA the route, based on the through service it could give to the Southwest Pacific and Orient points. He argued that the number of passenger offered improved service if either carrier were approved would be approximately the same, and that PAA would be able to render the service at a substantially lower cost to the government than would NWA. Furthermore, he said, a Honolulu route would be a "stub-end extension" for NWA bearing no logical relation to its Pacific system, whereas the same route would become an integrated part of PAA's route.

Sometime between July 29 and Oct. 2, President Truman had decided that additional service, supplementing Northwest's, was warranted in the national interest. So he ordered that Pan American be authorized to operate a competitive service over the same route. The CAB, which acts only in an advisory capacity to the President in international route cases and can do nothing if it disagrees with his conclusions or he with its, could only issue the award to Pan American.

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### Alaskan Air Lift

The West Coast stevedores were still out on strike, shipping was at a standstill, and settlement of the dispute was not in sight. Under these circumstances, Alaska, like blockaded Berlin, would have to depend on air transport for most of its daily essentials. And, as in Berlin, air transport was ready to do the job.

Acting at the request of the Secretary of the Interior and the governor of Alaska, CAB issued special exemption orders authorizing Pan American Airways, Northwest Airlines and all certificated Alaskan carriers to fly emergency service between Seattle and Alaska so as to alleviate an imminent shortage of food and other essentials resulting from the shipping strike.

The exemptions allow PAA and Northwest to fly from Seattle to Alaskan points other than their certificated stops in the Territory, and allow the Alaskan carriers to operate to Seattle even though their certificates do not provide for such service. Both exemptions were to expire Nov. 1 unless CAB should take other action meanwhile, but if the strike showed signs of continuing beyond that date an extension probably would be granted.

The airlines promised the utmost in cooperation. One of them, Alaskan Airlines, even went so far as to recall some of its planes on loan for the Berlin air

lift

Northwest promptly took two actions calculated to provide some relief. With special CAB permission, it instituted a special rate of \$15 per 100 pounds on air cargo flown between Seattle and Anchorage, offering a saving of \$7.50 under the previous rate. This rate, which would enable Alaskans to import greater quantities of food and other strike-affected items, will continue through the winter, regardless of whether the strike is settled.

Northwest also filed, effected Oct. 15 through Mar. 15, a special winter passenger rate reducing both one-way and round-trip fares between Seattle and Alaska nearly 25%.

Pan American operated more than a score of extra sections to Alaska during September, flying in 550,000 pounds of cargo in a smoothly functioning operation that left no backlog piled up.

# Savings in Money, Personnel Promised in CAA Reshuffle

By ERIC BRAMLEY

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The promised reorganization of the Civil Aeronautics Administration, both in Washington and the regions, will be effective Nov. 1, and is expected to result in savings of money and personnel.

Behind all the complicated charts and details of the reorganization, promised some time ago by CAA Administrator Del Rentzel, is one main objective: to make it easier for the "customer"—the public—to do business with the CAA. In the regions, for example, it will now be necessary for the aviation industry to deal with only one specialist in its problems instead of with several.

Many CAA activities will be reshuffled and realigned. Some offices are being abolished, others created. Lines of responsibility are changed, and some persons will be shifted from one job to another.' Rentzel was not prepared to say how many of CAA's 17,300 em-

ployes might be eliminated.

Occupying a key spot under Rentzel will be Fred B. Lee, who will be the only Deputy Administrator, as against the present three. George Burgess, who has held a similar position, will be resistency to Rentzel's office. The spot formerly held by Charles Stanton, who is on extended leave of absence in Brazil, will be abolished.

More Abolishing. The positions of assistants to the Administrator, of which there are seven, are abolished and the personnel involved will probably be consolidated into other related functions. The title of Assistant Administrator is abolished, and the head of each office will be known as a director, in line with practice of other government agencies.

In Washington, two new offices are

1. Office of Program Planning and Evaluation. This is established to meet the need for a small but specialized group primarily charged with top level planning and evaluation of the major CAA programs, both domestic and foreign. To this office will be transferred some functions of the abolished staff programs office, standardization coordinator, special assistant for research, military liaison, and the technical development policy committees.

It is also charged with the planning and coordination of research and development programs, determination of the training level and program emphasis placed on the Aeronautical Center at Oklahoma City, program planning, and the control of the foreign missions

Office of Aviation Development.
 Into this office will be consolidated the

groups charged with developing and promoting civil aviation, such as the Office of Aviation Information, Office of Aviation Education, Assistant to the Administrator for Personal Flying, etc.

Abolished is the Office of Field Operations, which has served as Washington liaison and representative of the nine regions. Howard Rough, who heads this office, will be reassigned to Rentzel's office.

27 Reduced to 19. The reshuffle results in a reduction from 27 to 19 in the number of executive personnel reporting directly to the Administrator. After the reorganization, there will be in Washington the following offices: general counsel, program planning and evaluation, aviation safety, federal airways, airports, aviation development, and business administration.

Edgar Smith, who has been deputy assistant administrator for airports, will be acting director of airports, replacing H. A. Hook, who has requested a transfer for reasons of health. Hook will take over as chief of airports division in the 6th region.

Rentzel said that under the reorganization "the fundamental responsibility of the Washington staff can be one of program planning and policy determination, program evaluation, and program controlling, and the fundamental responsibility of the CAA field organization can be one of program execution within

First Mail Sack—S. Sioughter, of Ithaca, N. Y., hands up the first sack of mail to be transported over Robinson Airlines, new regional carrier connecting upper New York State points with the metropolitan N. Y. area through Teterboro, N. J., Airport. Looking on are T. P. Wright, former Civil Aeronautics Administrator and now president of Cornell Research Foundation, and Mrs. D. H. Robinson, wife of the founder of the airline.

the . . . plans and policies established in Washington."

Regions Not Reduced. There will be no reduction in the number of CAA regions. Rentzel said the regional setup is being studied, but that there will not be a decision in the near future.

As to the regions, Rentzel said it was necessary to decide whether "(a) the several Washington program offices should have direct-line control over the counterpart 'executing' organizations in the field, which would essentially result in several separate CAA field organizations over which there would be a minimum of coordinating control at the field level, or whether (b) the several programs within CAA are so related, and their several impacts on the 'customers' of CAA-the public-sufficiently similar, that a regional administrator is required who will be responsible to me to insure that a coordinated and integrated approach is taken in the field execution of all programs in a given geographical area.

"I believe that the decision to have responsible regional administrators, which was made several years ago, is a sound one, and accordingly this organization concept will be continued."

Reporting to the regional administrators will be the following divisions: operations planning and evaluation, legal, business administration, airports, facilities, airway operations, aircraft and safety operations. Rentzel said that under this setup, the aviation industry "won't have to do business with more than one person on a given problem."

He said he was not prepared to say who would fill several of the important Washington offices, indicating that considerable work remains to be done on the reorganization. In a letter to all CAA personnel, he stated that "I believe you will find that these changes really do not represent drastic changes in our way of doing our job, nor result in shaking up the entire organization assignments which will have to be made . . . However, I wish to personally assure each of you, whether executive or subordinate, that the changes will be made keeping in mind both the welfare of the individual as well as the good of the organization".

Clinic at Chicago: The Chicago Bar Association will sponsor an Aviation Law Clinic to be held Oct. 28 at its headquarters, 29 S. La Salle Street. Clinic will start with a luncheon session at which Paul M. Godehn, Chicago attorney, will present a general review of aviation legal problems. There will be panel discussion in the afternoon on the subjects "Use of Airways and Airports," "Aviation Accidents—Liability," and "Economic Regulation of Air Carriers." Joseph J. O'Connell, Jr., chairman of the CAB, will be principal speaker at the dinner that night.

program.

### RFC Offers No 'Bail Out' For Airline Management

By THE FINANCIAL OBSERVER

In the air transport industry's applications to the RFC, there has been a general misunderstanding of the basis under which the RFC could operate.

Probably the most general error has been the assumption that the RFC does not have to have demonstration of repayment of the loan. If such demonstration were possible, commercial credit would be available; therefore, the airlines actually were expecting a "bail out."

In the inability to demonstrate repayment of the loan, the airlines sometimes fell down on the first step which would be to demonstrate that the revenue would be ample simply to pay off the loan on the new equipment. In other cases the burden of existing debt made them unable to make a proper showing for repayment of the new loan. In this regard the airlines have not generally understood that existing debt cannot be set aside except by the agreement of the creditors or through court action.

Getting creditors' agreement has been difficult, and the airlines have been unwilling to go through court reorganization. There has been a general feeling among manufacturers and airlines that the equipment itself should be sufficient for either commercial or RFC lending. Undoubtedly, they have this conviction because of equipment financing for railroads.

Comparison Unsound. The situation in railroads is quite different. First, the articles financed are standard and have proven records of earning power and adaptability. They are not as vulnerable to obsolescence through technological development, which means that if necessary a period for repayment can be extended more readily.

To elaborate, rail equipment is generally financed over a period roughly half of its expected life. For example, equipment financed over a 15-year period is expected to have a useful life of approximately 30 years. This means that a lender can "ride it out" over one or two down swings in the business cycle and still get paid off.

As you can see, the situation is quite different in air transport where the life of the plane is probably only five to 10 years and financing is expected to cover the full span of its useful life. And to drive this point home, this five to 10-year life is probably applicable only to the first versions of a new model rather than to the tail end of the run, and in any event, it is only equivalent to approximately one complete business cycle whereas rail equipment probably spans three or four.

Another basic difference between air transport and rail equipment financing is that the railroads have generally gone through court reorganization and, therefore, the problem of the relation of existing debt to the obligation incurred on the new equipment is a practical credit basis. Furthermore, the Bankruptcy Act creates sound footing for the lender on new equipment by setting forth certain rights.

Faulty Thinking. The airlines again have been unwilling to support legislation, which has been suggested, to give them the same basis in the Bankruptcy Act as is now provided for railroads.

There has been very faulty thinking among the airlines on this point. It seems that those who felt they had ample credit have taken the negative attitude, thinking that they had a particular advantage over their weaker brethren with the statute as it stands today. One becomes quite interested in this speculation as he investigates the matter in the ATA to determine who has been active in developing the negative attitude in that body.

Occasionally those interested in air transport financing refer to the motor carrier equipment loans. Here again the comparison is not sound, as the equipment is standard and the earning power is easily appraised. Much more can be written, of course, on this particular comparison, but it would be well at this time to drop this element of the subject and look at what has happened to air transport applications that have been submitted to the RFC.

Perhaps we have touched on one of these already in the discussion of the position of existing debt in relation to the obligation to be incurred on new equipment. Certain applications have fallen down because of the RFC requirement for the subordination of other debt. Others have been unwilling to meet RFC terms on such points as their management clause.

Several airlines are so deficient in working capital that even after setting aside all existing debt and getting 100% financing on new equipment, there would not be enough cash in the till to carry on day-to-day operation.

'Bail Out' Expected. This probably brings us back to the subject "bail out." Some airlines have expected that either the RFC or the CAB would perform complete "bail out." They have generally hoped that retroactive mail pay adjustments would revitalize their balance sheet and provide them with the new working capital.

The airline stockholders, of course,

have been hopeful with management that this would take place. There may have been considerable carelessness on the part of airline stockholders because of their feeling that the government would refill the till. The stockholders expect the protection of the courts extablishing the normal stockholders rights. To maintain these rights, many feel that the stockholder has certain responsibilities, i.e. to change the board of directors or management if operations are not carried on in a profitable manner.

When a company goes through the courts for reorganization, an adjustment of the creditor and stockholder position is made. If the court determines that the creditors have been more important to the company, the common stockholders may be wiped out.

To balance this criticism of the stock-holder, there will be the justifiable counter argument that managements and the CAB have misled them. This matter of misleading undoubtedly developed from poor analysis and confused thinking in both management and government. This is a subject in itself and should be left for later discussion.

From all of this it might seem that there is no place for the RFC in air transport financing. This undoubtedly is not true, but as you can see, there is little reason for RFC participation when ample funds are available for industrial loans.

If RFC funds are used in bad credit situations, not commercially bankable, the result might be the freezing of inefficient management, illogical route structures, the inhibiting of needed mergers and ultimately the bringing down of the whole air transport industry to the level of the weakest companies. In such a situation government ownership would certainly be imminent.

Profit for MCA: A net profit of \$11,033 after adjustment for taxes was reported by Mid-Continent Airlines for August, as compared to an adjusted net of \$16,110 in the same month last year. Company's operating revenues for the month totaled \$613,039, up 9% above last year. Operating expenses were up 22%, from \$486,488 to \$595,355.

NEA Shows a Net: Northeast Airlines' net from August operations was \$39,500, as compared with \$7,016 for the preceding month and \$33,700 for August, 1947. Company carried 33,874 revenue passengers and flew 6,516,638 revenue passenger miles during the month.

Tigers Report Loss: A net loss of \$349,262 for the fiscal year ended June 30, compared to a loss of \$778,129 for the previous fiscal year was reported by The Flying Tiger Line. Total operating revenues to June 30 were \$3,-281,815, against \$4,725,544 for the preceding year.

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### TWA Penny-Saving Adds Up To \$200,000 Monthly

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The wag who quipped unkindly of Trans World Airline's budgetary control system that "Now they've got it down to where they can tell just how much money they will lose tomorrow" entirely missed the point of the program, according to A. V. Leslie, vice president-treasurer of TWA.

"The point is that we now know for the first time just how much money is coming in and how much is being spent in every phase of the company's operations each day, week and month, and we can spot variances in revenues and expenses in time to take remedial steps before the thing becomes serious," Leslie said in a discussion of the control system developed by himself and other TWA fiscal officers with such success that representatives of 15 other airlines went to Kansas City Sept. 27-28 to study it.

The two-day meeting was called by Edward F. Kelly, executive secretary of the Airline Finance and Accounting Conference of the Air Transport Association, who thought budgetary officers of other airlines would be interested in hearing first-hand how the budgetary control program had enabled TWA, among other things, to effect economies resulting in an average monthly saving of more than \$200,000.

An additional \$200,000 monthly is being saved through consolidation of the domestic and international division.

Why & Wherefore. The program had its inception some 18 months ago, when TWA fiscal officers began to foresee the large (\$6,823,730) operating loss the company was heading for in 1947.

The program that finally evolved and was put into effect in September, 1947, was a product of the joint efforts and thinking of Leslie; Henry McGrew, director of budgeting control; L. R. Gilleran, controller; E. C. Peet, director of accounting, and T. D. Cherry, assistant director of budgetary control.

Key to the success of the program, according to Leslie, is cost-consciousness—a constant and critical evaluation of all expenses, with particular emphasion the seemingly unimportant sources of potential savings.

Typical small economies, as explained to the conference group by F. E. Busch, director of operations—domestic, included these:

A savings of \$5,000 a year was affected at one point alone in the cost of coveralls when arrangements were made to have a laundry furnish them free in order to get the cleaning business. Dis tilled water was eliminated from water coolers in favor of city water, with savings of \$15 to \$30 monthly per cooler at 52 airport station offices.

The number of paper forms used by TWA were slashed from 1,800 to 1,100 in one year and within another year it is hoped will be further reduced to between 700 and 800. Saving to date is about \$10,000 a month.

A critical appraisal of floor space occupied by TWA domestic offices led to sub-leasing of unused space to other airlines or other companies at 27 points with an aggregate saving of more than \$25,000.

Economies of \$3,000 a month were gained in closer supervision of long distance telephone calls, together with elimination of duplicating telephone instruments.

Passenger service items proved another point of savings, with these aggregating \$100,000 over the last year.

Important savings have resulted from the increasing attention TWA has paid to on-time flight performance This program has had the net effect of giving the company three additional aircraft through reducing delays at terminating points, and the stabilization of flight movements has resulted in savings in overtime pay.

\$200,000 Per Month. Larger economies stemmed from recent organization changes that effected a streamlining of the company and are estimated to have saved \$200,000 monthly. Then there was a general tightening up of the organization and consolidation of positions with the result that the number of employes

was cut back from approximately 17,000 to 13,500 in less than 18 months.

A significant point of the TWA program is that the company has consistently reduced its fixed costs while simultaneously absorbing additional ton miles of operations. Using available ton miles as a yardstick, the company has shown these results:

TWA flew 70,146,000 available ton miles the first six months of 1947 at a cost of 35.95c per ton mile operated. In the second six months of that year, available ton miles had increased to 89,496,000, but the cost per available ton mile flown had fallen to 33.22c, a saving of 2.73c per ton mile.

In the first half of 1948, available ton miles rose to 90,053,000 and costs were still lowered slightly, to 33.15c per available ton mile. During the current half-year period, TWA is budgeted to fly 107,593,000 available ton miles at an estimated 30.64c per ton mile cost. If these budgeted mileage and a.t.m. costs are realized, a saving of 2.58c per a.t.m. operated will be shown over the final six months of 1947 for an aggregate saving of \$2,775,899 and an average monthly saving of \$462,650.

TWA didn't expect its budgetary control program to put it in the black in a matter of a few months. It is a longrange program.

Initial aim is to make TWA the most efficient of the major airlines, with comparable expenses reduced to below those of its principal and most direct competitors—United and American. This goal is now in sight, and if it is achieved, the company will then concentrate bettering its own efficiency record and thus getting into the black again.

This may not happen before some time in 1949, or maybe not before 1950, but the company is on the way and the trend is consistently toward the objectives.





TWA Budget Control—T. D. Cherry, TWA assistant director of budgetary control (left) explains a profit graph to other airline budgetary officers in Kansas City last month, as A. V. Leslie, TWA v.p.-treesurer, and L. R. Gilleren, TWA controller, stand by.

### Airline Initiative Still Thrives:

### 10,000-Mile Air Tour Proves Good Tonic

By WAYNE W. PARRISH

If the financial statements and the other tough problems of the airlines get you down, here's at least a temporary cure: go out around the country flying on various airlines. It's an uplift worth the time, money and effort.

On an air tour during September of almost 10,000 miles on both trunk and feeder lines, I found the service and regularity good, the personnel morale high, the public riding the airways in large numbers, and everybody tugging away with ideas and initiative to make the business better.

The industry has some hefty problems, as witness the financial losses. But the trouble is one of adjustment to today's inflationary economics; it isn't an insurmountable fundamental problem. If the public wasn't riding the airlines, there'd be cause to worry. But out west there were many fewer empty seats than I had expected, and enough filled planes to make reservations essential.

Lines traveled on were Northwest, Trans-Canada, Western (including a complete trip over the Inland Division), United, Southwest and West Coast. The story about the two western feeders, Southwest and West Coast, will appear in the November 1 issue.

The trip brought several revelations, including the "singlest" bunch of traffic men in the airline business and one airline that has licked a large part of its food problem by serving its through passengers on the ground.

#### NWA Keeps 'Em Flying

The Northwest segment from Washington to Minneapolis was made under less-than-favorable circumstances. The Martin 2-0-2's were grounded and NWA was using every bit of spare equipment it could scrape up for the emergency. I hit a C-54 that was being used for pilot training and company cargo work. It had the Army interior, minus the hat racks, seat lights and ventilators. Most of the passengers were perplexed by this kind of a passenger plane, but NWA deserves credit for keeping up a large part of its schedules during the relatively short period when the 2-0-2's were on the ground.

The visit to NWA was under lessthan-favorable circumstances, too, just as any general office would be in such an equipment crisis. Some officials were in Washington; Croil Hunter, president, was dashing to Seattle, and everybody else was in a dither. Since then NWA has had a reorganization and the Martins are going back into service. The NWA accident didn't affect traffic as much as one might have expected, and my C-54 was filled from Pittsburgh to Milwaukee with a good load on the other two links.

G. G. "Jerry" Brooder, general manager of Western's Inland Division, arranged a dinner with his Twin Cities people at which industry problems got a lively airing. Present were Frank Lardent, Minneapolis station manager; Mason Mallory, the energetic and imaginative d.t.m. for Minneapolis; and Stanley Blunt, sales representative for St. Paul. Western has consolidated with Capital at the Minneapolis Airport and the pooling is working out very well for both lines.

#### Brooder Able Executive

Brooder and I made the Inland "local" to Denver by way of Huron, Pierre, Rapid City and several stops in Nebraska. The captain was Lee Osborn, an old hand with Western who usually flies the Denver-Great Falls route, and first officer was Reserve Capt. Milton Lipscomb. Marjorie Van Wyck, stewardess, has been with Western for five years, if I recall correctly. At Pierre I met the only feminine passenger agent left on the division, Linda Patterson, one of a group of war-time employes.

Relatively few in the airline business have ever met quiet, modest Jerry Brooder, but he is one of the best executives in the business. He was a Wyoming business man who invested in Wyoming Air Service when it was formed in 1930. As an officer and director he became more and more active in the airline. WAS became Inland Airlines, and then it was purchased by Western. Brooder remained on the job and since last year he has been general manager.

Having traveled with him over several routes I can testify that he's one of the best respected men in the six-state area served by Inland Division. He's a great credit to the business, has stature, and shows intense interest in his airline. And his people like him.

Inland's territory could hardly be called populous but the load factors have been above 65% and the line serves an area where transportation is badly needed. It's a growing region, too, what with oil in Wyoming and the big new dam at Pierre, S. D. Such points as Rapid City, S. D., generate much more traffic per thousand population than large cities.

With 208 employes and four DC-3's, Inland made a profit of \$13,000 after taxes for the first seven months of 1948. Starting this month the Division put a fifth DC-3 in service and re-arranged its schedules which should help the general picture. Inland Division gets a higher mail pay than Western's other routes, but it still isn't in the subsidy class, all things considered.

Brooder arranged a dinner at the Denver Club for C. E. Woolman, president of Delta Air Lines, who was on his way to the annual fiesta of the Conquistadores del Cielo in Wyoming. For almost two hours Woolman talked to a group of Denver airline men about current industry problems. If top executives could only get out more and open up frankly to personnel about current headaches, with the frankness of Woolman, the morale uplift would be terrific.

From Denver to Cheyenne on United—and a hard time to get a seat. Finally one opened up. At Cheyenne, Inland's counselaire—its own peculiar designation for a feminine sales manager—was Ellen O'Leary, whose father was once Inland's board chairman and who is now one of United's lawyers. She has been with Inland five years. At the airport Dick Batchelder, station agent, was one of the most alert agents spotted on the whole trip.

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#### Inadequate Terminal

From Cheyenne to Great Falls it was a night flight hitting all the stops. Capt. Charlie Metcalf had the master's touch on landing that DC-3, every single landing being as light as a feather. First Officer was Eugene Black and the stewardess was red-headed Dorothy Rush who's been flying for three years.

At Great Falls, in the tow of Herb Hanson, district sales manager; Wallace Baker, station manager, and Carl Rimmel, chief mechanic, I got a glimpse of the Air Force base before taking off for Lethbridge, Canada. The U. S. immigration and customs stop is Cut Bank, Mont., and one could scarcely imagine a more inadequate terminal. A couple of small rooms on the windswept prairie, no suitable facilities for opening baggage, and a disgrace compared to the excellent facilities at Lethbridge.

Somehow or other Harold Long, the famous editor of the Lethbridge Herald, and Ernie McFarland, head of the local chamber of commerce and a long-time aviation enthusiast, had received word I was coming. It was a pleasant reception but nothing comparable to my return trip when the three of us had it

steak luncheon in the local flying club quarters at the airport. The flying club, incidentally, is a live outfit and has large lounges, a bar and a fine dining room. Airline transients are welcomed and there are even sleeping accommodations available.

The Trans-Canada flight from Lethbridge to Vancouver was an unscheduled shuttle plane which was just about filled despite the fact that it wasn't advertised in the timetables. The DC-4M, still a bit noisy until modifications are completed, is a smooth-riding and comfortable airplane and the flight over the Canadian Rockies on a clear day is one of the most spectacular in this hemisphere.

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From Vancouver I was driven by an enthusiastic TCA sales representative to Harrison Hot Springs, about 70 miles back in the mountains, where I talked to the general sales meeting TCA was holding there. TCA traffic and sales people are like those on all other airlines with one exception. They like to sing. Never have I heard the rafters ring from such genuinely real singing by a gang of airline people.

### 85% Rates No Blues

With an 85% transcontinental load factor, TCA isn't exactly singing the Two items seem to be getting blues. special attention, one being service and the other being cargo sales development. I think TCA is moving in the right direction by planning to have a passenger sales manager and a cargo sales manager on equal footing under the general traffic manager. Hugh Jonston, director of cargo sales, has been successful in fighting his department's battles. Although cargo is still a small factor in TCA, it seems to be getting more recognition in company organization than it is getting on many U. S. lines.

Some of the New York airline people may remember Pat Wilson who used to be around those parts and who now is serving under Graheme Gibson in the TCA office in London, England. If you ever get stuck for entertainment, call on Pat Wilson and let him lead the singing of "Come and Join Us." It surpasses any commercial entertainment on stage, screen or radio.

Bill English, v.p.-operations; Stull, who's been in the flying business 25 years and is now regional operations manager at Vancouver; Anson McKim, the astute and polished v.p.-traffic who until a year ago was one of the top Canadian government officials on international aviation matters; and Gordon Wood, general traffic manager, were all o deck for the sales meeting but the three regional managers-J. G. Maxwed of Montreal, Reg Campbell, of To onto, and W. J. Dalby, of Vancouver, were actually running the sessions. And if anybody sees me wearing a beautiful white Stetson and a sports sweater with names of Canadian towns plastered all over it, I was presented with same with great ceremony by Campbell's central region and Maxwell's eastern region respectively.

It was a smart idea for the top brass to keep out of the sales meetings most of the time. The traffic boys worked out their own problems with more frankness than would be possible with the big shots present.

TCA is now the seventh largest airline in the world in terms of route mileage. It has more evenly geared its equipment needs to actual traffic demands than some of the U. S. companies and hence has but two through transcontinental services per day. I got a good impression of the traffic teams and the healthy rivalry among the three regions. The boys played plenty hard at Harrison Hot Springs but they worked awfully hard, too.

Back to Lethbridge, connecting with Western and overnighting at Butte, then on to Los Angeles making all the stops. This western division of WAL is one of the oldest and most scenic air routes in the country. The population isn't great but the surface transportation is either non-existent or abominable. Hence air traffic is good.

And here is where Western has the jump on everybody else on the food problem. Western is serving its through passengers at airport coffee shops at Great Falls, Salt Lake City, and Scottsbluff, Neb. In-flight food service has been eliminated on all western and Inland flights except westbound on Inland from Minneapolis where no suitable ground food service is available at meal times.

The scheme is saving money for WAL, the passengers get better food than would be possible by in-flight service, and the passengers seem to like the idea. Of course, the flights are delayed by a half hour while the passengers are eating, but nobody minds this. Especially good are the meals

IADRON /

C. R. Heads AFA—C. R. Smith (left), chairman of the board of American Airlines, is congratulated upon his election as president of the Air Force Association by Thomas G. Lanphier, Jr., outgoing president and Idaho newspaper publisher.

served to WAL passengers by Don Robinson's very AA-1 airport coffee shop at Great Falls, Mont. I wish every airport manager and every airport restaurant operator could see The Horizon, as it's called. It's perfect. To show that good restaurants pay off, Robinson grossed \$12,000 the first month he was open. He pays 5% of the gross to the city and everybody's doing well.

Stopping the airplane for meals is a good idea on routes such as Western's in the wide open spaces. But WALL could go one step further and let the passengers pay for their own meals and there'd be very few kicks. This would avoid the necessity of close watching by the airline to see that its passengers get the breaks.

A waitress at the Salt Lake City coffee shop, for example, gave slipshod service to WAL patrons probably because she wasn't going to get tipped as much as she would in serving other customers. But the general idea is good, anyhow, and WAL gets full credit for solving satisfactorily the problem of food service on routes of this character.

This is one of many innovations instituted by Terry Drinkwater, WAL's new president who is gradually overcoming the line's financial difficulties.

(More details on WAL's on-theground food service appear on page 45.)

### AFA-ARA May Merge

Merger of the Air Force Association and the Air Reserve Association, as provided for in an amendment to the AFA constitution at the organization's annual convention in New York City in late September was expected to materialize by Dec. 1. The ARA, which is composed of less than 10,000 officers as against AFA's 74,000 officers and men, was expected to approve the merger at its convention this month.

Head of the merged organization, if it is approved, will be C. R. Smith, chairman of the board of American Airlines, who was elected AFA president for the coming year, succeeding Tom Lanphier, Jr., Idaho newspaper publisher.

Name of the merged organizations will be Air Force Association. The president and secretary will be AFA men, while the vice president and treasurer will come from ARA ranks. Six regional vice presidencies will be split 50-50, and AFA will have eight directors to seven for ARA.

In addition to Smith, newly-elected Air Force Association officers are: M. M. Frost, first vice president; Arthur F. Kelly, second v.p.; T. J. McHale, third v.p.; Julian B. Rosenthal, secretary, and G. W. Hobbs, treasurer.

One Air Force. The AFA, at its New York meeting, adopted a strong policy statement demanding "one Air Force for the nation," and adopted a resolution urging that the Air Reserve and Air National Guard "be combined into one federalized reserve component."

# These Aircraft Available

These aircraft are now available for immediate delivery. They may be converted to your own specification or may be purchased "as is!" They are ideal for airline, cargo or executive use.

### OTHER AIRCRAFT AVAILABLE

Boeing B-17G - NL licensed - 41:00 total hours

Curtiss C-46F - 350:00 total hours

Lockheeds - Lodestars - Electras - Twelves

Beechcrafts - Bi-planes and Bi-motors

Boeings - 247Ds - P-12 (Stunt Ship)

Stinson - SR-10Es - Douglas C-54Bs with E conversion - Consolidated B-24s, LB-30s - Lockheed P-38s

#### AIRFRAME SPARES FOR

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MAJOR OVERHAULED to moot C.A.A. requirements, low time, fully warranted; each \$2250.00



R1830-43-65

(Converted to 1830-92)

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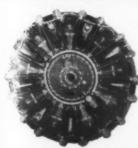
MAJOR OVERHAUL (military) first run (average total time 300:00 hours) with zero time since conversion to R1830-92 specification by recognized agency, block tested C.A.A. Form 337, warranted; oach \$1795.00



R1830-43-65

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### THE BABB CO., INC.



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# The Birdmen's Perch

By Major Al Williams, ALIAS, "TATTERED WING TIPS,"

Gulf Aviation Products Manager, Gulf Bldg., Pittsburgh 30, Pa.



We're going to start off the reactivated Little Known Facts About Well Known Planes Dept. with a bang.

We had so much help (by mail) from so many people when we were questioning whether to continue the "Facts Dept." that we figgered we owed you all a vote of thanks.

So we're sending some token Perch Pilot Commissions (bottom rung, naturally) to a fistful of names that we've pulled out of our mail bag. If you missed out on one of these "gift" commissions, remember that you can still earn one by sending in a Little Known Fact that's unusual enough to print.

Welcome to our select little group, Edward Watson, Cedarcrest Farms, Independence, Mo. And welcome to Sabra Baker, Cornell Pilor's Club, Ithaca, N.Y. And to Elbert Schory, Supervising Pilot, Ohio Forest Fire Patrol, and Dr. Verne F. Gouger, 5352a Devonshire, St. Louis, Mo., and Sgt. Don Edmonston, AF 16226013, Sqdn. K-2, Scott Air Force Base, Belleville, Ill.

Just watch how business improves, now that you're a Perch Pilot (br), John Isaacs, manager of Isaacs Field in Stanley, Wis.!



Like we said, these comissions are free for you six people—a gesture of good will, you might say. But if any one of you can get to sleep tonight without sitting down and writing up a few Little Known Facts for us, we'll be horrified, scandalized, and disappointed!

### TRIED IT YET?

Have you tried the great new Gulfpride Aviation—Series D—oil yet?

Like we've said, it'll free sticking valves and rings and it will keep them free for a long time.

And it'll give you many, many more hours between overhauls because of its ability to clean foreign matter from engine surfaces and keep it in suspension so that it flushes away at oil drains.

Remember, though, that this great new super-lubricant has been especially designed for horizontally opposed engines . . . should not be used in radials.

Remember, too, that we're inviting all dealers and operators to carry Gulfpride Aviation—Series D—so if yours does not have it yet, remind him that he can save money on spare parts and overhauls with this sensational new Gulf Oil!



NOTE: We're still getting acquainted with our new F-8 Gulfhawk. We'll try to let you know more about her next month. We can tell you now that she's got a lotta muscle!

Gulf Oil Corporation and Gulf Refining Company...makers of











### Run-Around for Air Cargo

We would like to believe, particularly in these times when we might be plunged into war at the drop of an utimatum, that the big brass who control our aerial destinies from their ivory towers in the Pentagon have a pretty good idea what they are doing.

But every now and then they come up with something that makes us wonder. Such as the latest procurement request which is now kicking about the government channels between Defense Secretary Forrestal and the President awaiting final certification.

When we were plunged into the Berlin air lift unexpectedly it soon became apparent to military observers that the Air Force was woefully weak in cargo plane strength. A storm of criticism descended upon the AF brass for having permitted the transport branch of the service to deteriorate while building up a huge fleet of fighters and bombers.

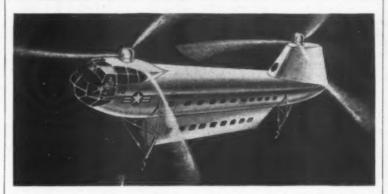
The top brass had an answer for the criticism. They pointed out that they had been allotted only so much money for aircraft purchase and had been forced to concentrate on combat aircraft first. After building up to 70 effective, modern combat groups, said the brass, we will then turn our attention to the transport arm. It was just a question of priority.

Symington Explains. W. Stuart Symington, Secretary of the Air Force, sounded the keynote of the rebuttal in a recent address before the Air Force Association convention.

"It would seem there is little use in having capacity for air lift if you haven't also an adequate quantity of combat planes to control the air," he said. Pointing out that the Air Force had hundreds of obsolescent, but nevertheless useable, cargo planes in storage, Symington added: "It should be obvious that it is not as necessary to have cargo planes of the latest type as it is to have battle planes of the latest type."

This argument we thought reasonable. But then along came this new purchase request, which should be approved before this reaches print. It totals \$80,000,000, which will buy a fair number of planes, even at inflated prices. And what kind of planes are we buying, you ask?

Ten of the planes will be jet bombers, and they are the only planes on this latest list which qualify as first or combat types. Surely, then, one masons, the rest must all be cargo times. Uh-uh. A big slice of the loney goes for trainers, some more goes for helicopters, a little will go for assault transports (these cannot be considered cargo types and would have be used as such) and the re-



Transport Helicopter—Artist's conception of the Air Force's Piesecki XH-16 gient transport helicopter. The XH-16, still in an early development stage, will be roughly the size of a Douglas C-54. When completed it will be the world's largest helicopter. Piesecki Helicopter Corp. officials estimate that two prototypes will be ready in two years.

mainder goes for liaison planes. But no cargo types.

Now far be it from us to infer that we don't need trainers, helicopters, assault transports or liaison planes. But we should like to paraphrase the statement of the Secretary of the Air Force.

"It should be obvious," we paraphrase, "that it is not as necessary to have trainers, helicopters, assault transports and liaison planes of the latest type as it is to have cargo planes of the latest type." Or at least a sufficiency of cargo planes.

Take the trainers for an example. The trainers about to be purchased are the latest commercial model transports available (either the Convair-Liner or the Martin 2-0-2, no firm decision made as we go to press). They will be used as all-purpose trainers, for indoctrinating pilots, navigators and bombardiers in higher-speed aircraft than are currently available in the trainer category.

But how important is it in the overall plan to have a 300-mph training plane? Admittedly it has advantages. But are there so many advantages that they overshadow the excellent use that the Military Air Transport Service could make of these newtype transports?

The hundreds of stored cargo planes that Symington referred to are about 400 Curties C-48 Commendos. If we are in such need of multi-purpose, two-engine trainers, why not use these?

Speaking from the navigator's point of view, for we were such in the not-too-distant past, the speed differential would matter little during the training phase. Instructors could simulate faster speeds by stepping up the time between log entries. Military pilots to whom we have spoken have said that the speed difference is not too important to the pilot, either. Procedure is the thing. Learn to feather an engine

on a C-46 and with a short briefing you can feather an engine on any other type. For initial bombardier training, ballistics and bombsight manipulation could be learned in slow trainers, with adjustment to higher-speed sight handling during the transition phase of the bombardier's training. Even with initial training in a 300-mph trainer, the bombardier would still have to adjust to the faster speeds of operational bombers.

It should be equally obvious that the other plane types are subordinate in importance, as regards air preparedness, to new, or more, cargo planes. At least it is obvious to the sideline observer. Apparently it is not so obvious to our top brass.

As we say, we would like to believe they know what they are doing. But sometimes we wonder.

#### Airline Pilots for Berlin

The Air Force is planning to offer temporary active duty commissions to reserve officers who have sufficient flying time on four-engined aircraft for use in the Berlin air lift. Included will be all airline pilots who have Air Force Reserve commissions. Press reports stating that Naval Reserve officers are eligible are inaccurate.

Air Force officials believe this plan would provide employment for airline pilots who might otherwise be laid off during the slack winter months. The pilots would be recalled to active duty for a theoretical three-year period, but would be released upon request by a special agreement. The Air Force has approximately 8,000 applications for active duty from reserve officers, but there is no figure available on the number of qualified four-engine pilots.

All officers selected for recall will be sent to the Air Force's new Berlin air lift orientation school at Great Falls Air Force Base, Mont.

JAMES J. HAGGERTY, JR.

#### -ADMINISTRATIVE-

John J. McArdle has been named manager of properties-international, for Trans World Airline at its New Castle Base, and James G. Vineyard has become director of overseas properties, based at Paris.

Pierre G. Desautels, who recently returned after two years in Geneva as TWA's district manager for Switzerland, has taken over as TWA district manager in San Francisco.

Charles A. Whyte has been promoted from district sales manager for Pacific Northern Airlines at Juneau, Alaska, to district manager in charge of all PNA activities at Juneau and Gustavus.

Joseph F. Drury has resigned as district publicity manager of United Air Lines in New York to concentrate on magazine writing.

#### -TRAFFIC & SALES-

Ralph S. Maugham, formerly assistant to R. E. S. Deichler, vice president-sales for American Airlines, has been named to the newly-created post of interline sales manager. Maugham is a 20-year veteran in air transportation, having held numerous positions with American and before that with its predecessor company, Colonial Airways.

Willis C. Baker has been appointed assistant to the vice president-traffic of National Airlines, succeeding Eustace L. Adams, Jr., who resigned to attend to private business. Baker will continue to serve as system reservations manager, a post he has held for three years. He was with American Airlines seven years before joining NAL in 1944.

Herbert Salyer has been named manager of tariffs and schedules for Colonial Airlines. He formerly was director of research and statistics.

Bernard J. Petit has been appointed as manager of tariffs and schedules for North American Division of Air France.

Alfred M. Nelson, PAA district sales manager at Shanghai and before that with UAL for many years, has been made district traffic manager for Pan American in Australia, with head-quarters in Sydney. Will Ortwin, who has been on special assignment for PAA in Singapore, will replace Nelson in Shanghai temporarily. Percy C. Bell, formerly d.t.m. at Sydney, and Alan McIntyre, at Melbourne, have been made district sales managers for their respective areas.

Edward P. Ryan has been promoted from chief agent for National Airlines at Washington to traffic manager at Norfolk, succeeding R. F. McGrath, resigned.



Two Decades with AA—
C. R. Smith, chairmen of the board of
American Airlines, reached his 20th anniversary with American and its predecessor
companies on Oct. I. Company officials
gave a surprise dinner for him in New
York to mark the occasion.

Walter A. Rollins has been made regional traffic manager for Trans-Texas Airways in the new regional office in Dallas. Other regional office heads are as follows: William F. Keefer, San Antonio; Andrew G. Shupe, San Angelo; Harry G. Cheadle, Brownsville; William F. Fant, Beaumont. Cheadle served formerly with Chicago & Southern, and the others were formerly with Braniff.

Irene Replogie has been appointed chief stewardess for Challenger Airlines. She served six years with Continental Air Lines, both in ticketing and reservations.



Ralph S. Maugham American's Interline Sales Head

John Woodruff has been appointed assistant traffic manager of Colonial Airlines. His former position of supervisor of reservations and ticket offices has been taken over by Jay L. Sheppard, formerly manager of tariff procedures. Rollo Lynch, formerly in sales in New York, was promoted to manager of tariff procedures.

Manuel Collazo, a native Puerto Rican with Pan American Airways for the past three years, has been transferred from Miami to New York, where he is to work directly with the Puerto Rican colony in the Bronx.

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James A. Miller, formerly an overseas station manager for American Overseas Airlines, has joined Colonial Airlines as manager of New York reservations.

Louis A. Delebecque, formerly district traffic manager for Pan American at Juneau, has been appointed Alaska sales manager for Pacific Northern Airlines.

E. H. Herold, cargo traffic superintendent for Pan American Airway's Alaska region, has been transferred from Seattle to the Pacific-Alaska division headquarters at San Francisco.

James M. Wulpi, district traffic manager for TWA in India until his return to the U. S. in July, has taken over as district manager at Scranton-Wilkes-Barre. He has been with TWA since 1933.

Charles H. Startup, sales manager for American Airlines in Baltimore for the past year, has been appointed to the new post of New York district passenger sales manager. Del Bogart, formerly cargo sales manager in New York City, has been named district cargo sales manager.

Mrs. Jean L. Norton has been promoted from ticket agent and reservations supervisor in Kansas City to the newlycreated post of convention secretary for Braniff Airways.

Morris C. Cain has joined Trans-Texas as a traffic representative in Houston.

Branch T. Dykes, Jr., former city ticket office manager for Colonial at Syracuse, has been appointed Syracuse district traffic manager.

—OPERATIONS—MAINTENANCE— Harley L. Edelman, formerly chief agent for National Airlines at Pensacola, has been appointed station manager at Charleston, S. C.

W. E, "Slim" Larned, superintendent of flying for United Air Lines, recently was awarded a diamond pin for 20 years of service.

Lloyd R. Wilson, Jr., has resigned as assistant general manager of the Aircraft Owners and Pilots Association. He has not announced his future plans. Charles D. Daily retired last month as superintendent of airports at Kansas City and has gone to Germany to become administrator of airports in the Munich area, working in a civilian capacity. An old-timer in aviation, he was a barnstormer and then an airline pilot before becoming manager of the Kansas City airport in 1934.

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E. A. Lister, acting chief of the State Department's aviation division, will leave for London Oct. 15 to take over as U. S. civil air attache to Great Britain, succeeding Livingston Satterthwaite, who will return to a non-aviation assignment in the State Department. Tom Carter succeeds Lister as acting chief.

### Behncke Heads Int'l Pilots

David L. Behncke, president of ALPA has been elected the first president of the International Federation of Air Line Pilots Associations, composed of pilot organizations of 13 countries. The election was held at an international conference in Paris.

Besides the U.S. ALPA, the IFALPA is composed of pilot-representing associations of 12 foreign countries, including Australia, Belgium, Canada, Den-mark, Eire, France, New Zealand, Norway, Central Africa, Switzerland and Great Britain. It was organized to consolidate pilot unions of the various countries, to insure that pilots' recommendations are made known to the proper authorities, and to establish a "voice . . through which the objectives of the men who actually do the flying might be attained on an international scale."

#### NAL Officers Re-Elected

Stockholders and directors of National Airlines at their annual meeting in Miami, re-elected all officers and directors and added one officer, W. F. Johnston, formerly chief accountant, who was elected assistant treasurer. A unanimous vote of confidence in management and appreciation of the manner in which the business of the company has been handled during the eightmonths pilot strike was passed.

Medal of Honor: Capt. John David Hissong, a pilot on Eastern Air Lines' New York-New Orleans Constellation flights, was awarded the Air Mail Flyer's Medal of Honor on Oct. 4, the presentation being made by Postmaster General Jesse M. Donaldson on behalf of President Truman. He was the 10th men to receive this award, which was authorized by Congress in 1931. Award was for successfully landing a burning EAL air mail plane and evacuating its passengers on Oct. 18, 1938, near Montgomery, Ala. Letters of commendation went to his copilot, C. R. Russell, now an EAL captain, and his flight steward, Frank Gibbs, now EAL station manager at Pensacola, Fla.

### **Airline Commentary**

THE OTHER day we were in a certain city of about 85,000 population . . . In the lobby of the leading hotel, a certain airline maintains a desk, and there was an attractive blonde behind it . . . Inasmuch as we had a few moments before departing on the limousine, we thought we'd find out what she thought about the airline fare situation . . "It's driving me nuts," she said, pointing to a big bundle of bulletins she had received from company headquarters .

"It's a snafu situation, isn't it?" we replied. "For instance, TWA has an

extra fare, but United doesn't have an extra-

"Why, certainly United has an extra fare," she interrupted. "It says so, right here" (pointing to bulletin #89436).

"United did have an extra fare," we replied, showing off our knowledge, "but they took it off, and then American put its 5% discount on-

· She busted in again. "Now just a minute. American doesn't have a discount on roundtrips" (pointing to bulletin #94132).

"But American does," we said, trying to pass it off lightly by quickly switching to Eastern Air Lines, with a comment that EAL hadn't raised fares at all.

She got that desperate gleam in her eye and dove for the bulletins again.
"But Eastern has raised fares," she said faintly. "It says 10%."
"Must be tough trying to ticket people," we commented.

"Well, at least I've been collecting enough money," she said resignedly, as she put her out-of-date bulletins back in the drawer.

Need we make any further comment on the fare situation? . . .

A woman with a sweet voice called TWA in Washington the other day and asked for reservations . . . "Domestic or international?" asked the switchboard operator . . . There was a long moment of silence . . . Then the sweet voice said, "Well, domestic, I guess. You see, they're for my husband and me' . . . (She bought two tickets to Kansas City).

Al Dallas, of the Air Transport Association, was commenting to us the other day on the lead story which we wrote in the Sept. 15 issue . . . It was about the progress that was being made at the Civil Aeronautics Administration . . . Al quoted the following from the story: "You can look for action on the Civil Air Regulations. The cumbersome and legally-written CAR's are in for some extensive (and maybe spectacular) overhauling" . . . He then directed our attention to the "Wings of Yesterday" column in the same issue . . . And, by golly, right there under the heading "10 Years Ago" was the following item: "General overhauling of the Civil Air Regulations with radical simplification and elimination of all unnecessary rules was underway by the Civil Aeronautics Authority" . . . We understand that someone has already called the two items to the attention of CAA Administrator Del Rentzel . . . About the only comment we can make on this sad coincidence is that something better be done about the CAR's this time . . . We'd hate to have it end up as just another "Wings of Yesterday" item in 1958 . . .

We have a nice letter here from R. G. Bell, flight dispatch assistant for Trans-Canada Air Lines at Moncton, N. B. . . . Mr. Bell says that TCA has established a new traffic position in Montreal with the following title: Assistant Technical Advisor to the General Supervisor of Agency and Interline Reservations . . . "I think this takes the prize for lengthy job titles in air transportation," Mr. Bell comments. "Do any of your readers know of a longer one?" We'll have to leave that one to the readers . . . We took a hasty look through American Aviation Directory and failed to find one that came close . . . Anyone care to comment? . . . TCA is sure going to have to give the guy an oversized business card . . .

We present, without comment, the following news story from the London Times, for inclusion under the hazards-in-aviation department: "An aircraft carrying five French yearlings from Paris to New York returned to Shannon Airport shortly after taking off yesterday, one of the horses having bitten off the ear of the groom" . . .



### Room with a 10,000-mile view

THIS ROOM, the only one of its kind in the world, has ushered in a whole new era of airline operations. From all 80 cities on United's 10,000-mile Main Line Airway, a steady stream of vital facts is being funneled in and recorded on the charts and maps around the walls.

Weather reports. Position of equipment. The volume of traffic at each point. The actual progress of each Mainliner flight. Every detail of importance to top Operations and Passenger Service officials is right at their finger tips.

The result is headquarters control of Operations never before possible. The running record of performance shows where and how improvement can be

made. Conditions which might cause delays can be detected in the making and provided for in advance. Passenger services can be geared directly to the minute-by-minute operation of each United Mainliner, by direct telephone circuits to all United stations.

This efficient Operations Monitoring Room in Denver is concrete proof of United's determination to make Mainliner service the most dependable air service in the world . . . to do everything possible to get you where you want to go, when you want to go, and on time.

Next time you travel, fly - and fly United. For reservations call United or an authorized travel agent.



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### CAA Favors Major Change In Airline Inspection System

By WILLIAM D. PERREAULT

Each of the major airlines has undergone some major changes in maintenance organization during the past few years in the postwar move to enlarge maintenance facilities and with the resultant personnel shifting. In this process there have been some changes in the manner in which the maintenance inspection responsibilities have been delegated. The airlines are faced with the prospect of having to change their organization even more to meet changing government attitude toward the importance of the inspection functions.

The CAA would like to see "the organization of maintenance and inspection functions within each airline designed to eliminate any case where an inspector's decision can be overruled by maintenance production personnel. It is expected that this will be accomplished in most cases by making the inspection department responsible to the same top level office as the maintenance department."

This is in line with the recommendations of the President's Air Policy Board and those of a special CAA committee which was appointed under T. P. Wright, then CAA administrator. The CAB does not anticipate establishing regulations to implement this recommendation. Since the CAA would like to see the intent carried out it leaves them in the position of trying to adopt it under present day regulations or selling it to the airlines as a desirable point.

Airlines Oppose. The airlines are almost solidly against any proposal which would remove the inspection responsibilities from the maintenance department. Most of the discussions along this line have been between the CAA and the men in direct charge of maintenance functions. It is to be expected that there would be some resentment at any suggestion what would reduce the scope of their authority. This is particularly true when the very nature of the suggestion indicates that there might be a "quick" decision in regard to a worthiness as a result of schedule requirements of the aircraft.

Apparently with these things in mind, CAA incorporated the suggestion for a separate inspection organization in with the generally desirable Maintenance Certificate plan as a single package. The latter plan gave the airlines the opportunity to assume a good deal of the responsibility which they have long sought. Typical of these responsibilities are the establishment of inspection and overland intervals for aircraft, engines and components, approval of aircraft

repairs and modifications, self policing of regulations compliance, and aircraft weight control.

In the course of several meetings between the CAA and ATA it became apparent that something was wrong. No mention was made of how large a part the proposed inspection system reorganization might be playing in the disagreement but it was finally decided that the time was not right for adoption of the maintenance certificate plan.

Chief objection voiced by ATA was that after adoption of the plan the administrator would have unlimited control over the airline maintenance functions. This would result because the airline would be required to submit a statement of general policies which would be followed in carrying out the plan. Any changes in this policy would have to be approved by the administrator. It is acknowledged that misuse of this approval policy could lead to poor relations between the two groups.

Different Approach. Since this approach to the problem of establishing an inspection system separate of maintenance has been unsuccessful it is



Replaces Dycer— George W. Haldeman, who has been in aviation since 1918 and has heeded up CAA's 6th Region for the past few years, has taken over the position of Director of Aircraft Service, succeeding Charles Dycer, who retired because of ill health. Recently, Haldeman has been one of principal figures in certification proceedings of the Boeing Stratocruiser, the Lockheed Constellation, the Convair-Liner and the DC-6 modification board.

likely that within the next two months the CAA will make another try in this direction. Whether or not it will be retained in the maintenance certificate plan is unknown but indications are that the CAA will not work through the maintenance personnel this time but will approach top management with the proposal. This would eliminate the objections which might originate from the effect of any such ruling on the personal prestige of maintenance supervisors.

In the meantime the airlines have taken some concrete steps toward improving the inspector's position in the maintenance organization and preventing the overruling of inspection decisions by low echelon production people. In the past three years there has been a trend toward establishing a separate inspection system in the airlines but accountability of this section has still been within top maintenance levels and not to top management.

Several airlines have taken inspection personnel out from the jurisdiction of the crew foremen where they were formerly assigned and placed them under a chief inspector or foreman of inspectors. The foreman of inspectors or chief inspector is often accountable to the general foreman of the shift or department however and from time to time airplanes are dispatched against the judgment of the inspection personnel. Naturally, if time is plentiful the tendency is to correct every discrepancy in the aircraft's condition.

It is under the stress of schedules when the airplane is needed for a flight that the maintenance supervisor is called in for a final decision. This creates the impression that the supervisor always overrules on the basis of schedules, which gives a false conception. That some influence is exerted on any airline supervisor to make schedules is undeniable and since any case which would ever reach top supervision would be a borderline condition it is reduced to personal judgment of the supervisor.

Qualified to Decide. Supervisory maintenance people reflect long experience in aircraft airworthiness and this should qualify their judgment. Combining this with the fact that the supervisor has the benefit of the inspection personnel's views, he should be in an ideal position to render an intelligent decision.

CAA does not ignore this natural chain of supervisory qualifications in making last minute airworthiness decisions. It is a possibility that the quality of maintenance can be shielded by the man directly responsible for these matters which concerns them. If the airplanes were forced to be on the ground repeatedly because of unairworthy conditions it would reflect poorly on the maintenance supervisor's record.

Being in a position to see that all but the most obvious hazards do not delay schedules, unairworthy conditions might be put off temporarily to keep the schedule record clean. On the other hand, if these matters were brought to the attention of the man to whom the maintenance supervisor is responsible it would serve two ends. At this level the decision would not reflect on the judge's adequacy in his work and the knowledge that such matters would be brought to light would increase the efforts of the maintenance supervisor in keeping his department's work beyond reproach."

Both the airlines and the CAA feel that the delay in adopting any specific ruling in this matter is most valuable for it permits both sides to reflect on the benefits and the detriments which are likely to result. If a mutual agreement can not be worked out it is possible that the CAA will ask the CAB to adopt a ruling which would establish the Maintenance Certificate and with it the inspection requirements mentioned above.

The ruling would be an alternative which the airlines would not have to adopt but which would be available to them. The likelihood that one or more airlines would adopt the entire program is pretty good and it would provide the other operators with valuable information on which to base their future actions.

### **Reversing Props in Flight**

The single question which has been repeated most frequently in the past few years is, "What would happen if the reversible pitch propellers should reverse during normal flight?" Engineers and instructors have hastened to cite the many safety devices built into the reversing systems to prevent such occurrences. The thought remained of the many safety devices which have been overridden in the past and speculation continued.

In November of 1947 Herb Fisher and W. Sterlick of Curtiss-Wright Corp. made flight tests in a C-54D to determine the possible effects of such a happening. In the final phases of these tests all four propellers were reversed while the airplane was cruising at approximately 175 miles per hour. The horizontal stabilizers vibrated noticeably, the noise level in the cockpit and cabin increased as the propeller rpm increased momentarily, and the airplane settled at a rate of 7,000 feet per minute. The airspeed dropped for a moment but then returned up to 175 miles per hour while the airplane assumed a glide angle of about 15 degrees.

A completely new conception of making a rapid descent was born. Previous tests showed a maximum rate of descent under normal conditions of 460 ft./min. at which time the airspeed reaches the placarded maximum of 275 miles per hour. The new method may prove a practical method of making emergency descents in the event that cabin pres-

surization fails at high altitudes or fire on board the aircraft makes a landing mandatory. The possibilities are almost unlimited!

Prior to the reversal of all four propellers these tests provided some other valuable information regarding the flight characteristics to be expected if one or more propellers were reversed. For instance, it was proven that with this engine and propeller combination airspeeds above 205 mph or power above the idling range caused the engine to overspeed. Similarly, if the reduced power were not increased at the moment when the rpm reached its maximum (indicating the blades were passing through the flat position) there was a tendency for the propeller to windmill backward.

Pilots had generally felt that the reversal of a propeller in flight would have created an uncontrollable yaw condition and this appeared to be borne out by several ground instances in which propellers in opposite pitch angles forced transports off the runway in landing. The tests proved that in flight the yaw is present but is entirely controllable.

The only undesirable flight characteristic indicated was the feeling which accompanies the early stages of a stall which accompanied the propeller reversals but this was only momentary.

The C-54D airplane in which the flights were conducted was powered by a P&W R-2000-11 engine and used C-W C532S-D propellers and 836-14C2-18 blades. Reversing was accomplished by dual boosters with one unit connected to propellers 1 and 4 and the other supplying 2 and 3. Pitch setting in reverse

was fixed at —18 degrees by Mechanical stops and it was not possible to control intermediate positions since the governor did not allow for constant speed in reverse pitch.

Rate of pitch change was 8.8 degrees per minute. Inasmuch as reverse sensing propellers were not used it was necessary to use push buttons to control the propeller reversing.

No structural damage occurred to the airplane nor did the reversals have any tangible effect on the propellers but this condition might not result from parallel tests with other airplanes and engines of the same series. Pilots have been cautioned against any ideas along these lines until further testing is completed.

The pilots felt that the use of a governor which could be controlled in the reverse angles would permit much more desirable operation. By increasing the rpm to a point above 100 rpm it was felt that some of the airplane vibration could have been eliminated and higher rpm might have permitted even greater rates of descent.

#### Delta Gets First DC-6

Accepting delivery on the first of five Douglas DC-6 aircraft, Capt. Charles H. Dolson, v.p.-operations, flew Delta Air Line's new "Flying D" 2,154 miles from Santa Monica, Calif. to Jacksonville, Fla., Oct. 4 in six hours, 43 minutes and 10 seconds, setting a new official record for commercial aircraft between the two cities but missing by 38 minutes the Pacific coast-Florida east coast record held by National Airlines between Santa Monica and Drew Field, Tampa.



Exit the Ladder—This specially constructed dock in use at Pan American Airways' Miami headquarters is form fitting to the lines of the Constellation and permits the maintenance personnel to service the entire airplane with very little use of regular ladders. These massive docks reduce accidents and speed production.

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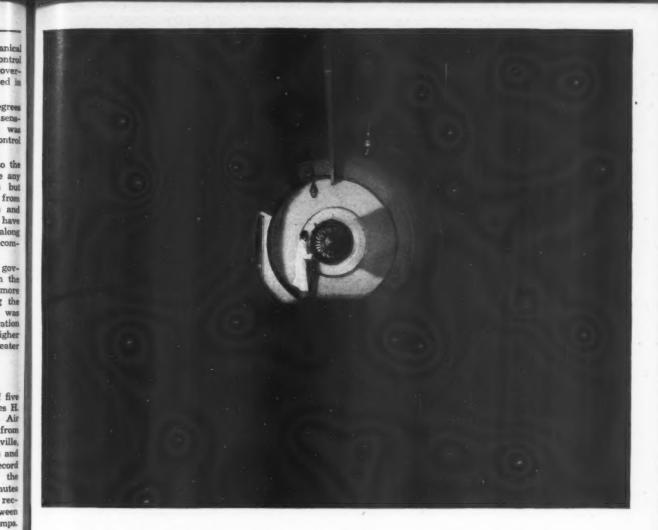
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- ▶ The accuracy of the data obtained by testing various compressor designs in this unit is very important to Wright engineers...because a small improvement in compressor efficiency results in a considerable increase in the overall efficiency and power output of new engines... and better efficiencies and higher powers are their constant goals.
- Another example of the painstaking research behind the development of Wright aircraft engines.



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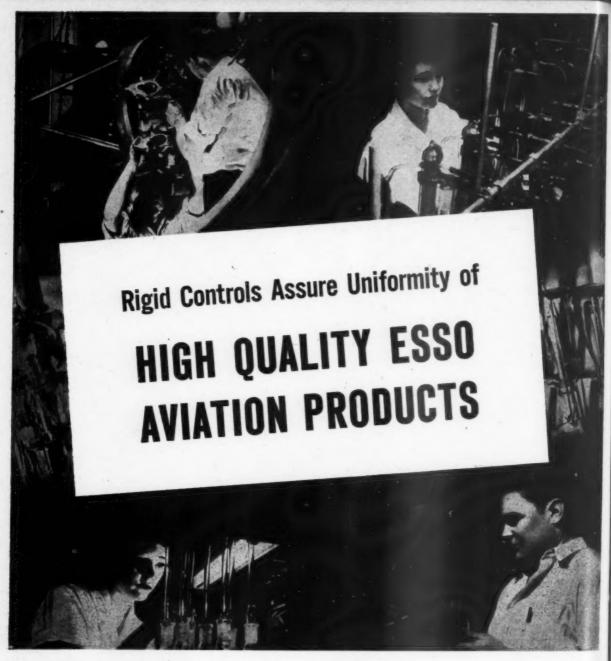
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Esso Aviation Products are always of the same high quality, wherever they are sold around the world. The control of quality starts in the laboratories where 2,000 trained petroleum scientists and technicians contribute to the development and testing of products to meet the specialized needs of aviation, and then set up the rigid specifications which assure continued quality control. Ceaseless testing continues, so that fliers everywhere may be assured the name Esso means rigid specifications met in every detail.

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### Sperry Zero Reader Offers Way for Simplifying Cockpit

Studies reveal that during a landing approach on instruments the pilot devotes 41% of his attention to the cross pointer indicator used with the instrument landing system. This limits his attention to the other instruments so that the directional gyro receives about 26%, the attitude gyro 15%, the air speed indicator 10%, altimeter, rate of climb and engine instruments 2% each and the bank and turn indicator 1%.

The difference between a skillful instrument landing and poor one in closely allied to the pilot's ability to coordinate the readings which appear on his flight instruments and translate them into corrective action as necessary. Two factors work against the pilot. First, a multiplicity of instruments must be referred to, and second, the cross pointer indicator, being an approach instrument is used relatively little and the pilot can not maintain proficiency in its use.

Engineers in general have recognized this for some time and manufacturers have sought new methods of instrumentation to simplify the pilot's problem. In this light five major instruments have been under consideration. These are the composite indicator developed by the Air Force, a modified flight indicator, a heading displacement indicator, arate displacement indicator, and the Sperry Zero Reader.

Provide Missing Link. Essentially it might be said that these instruments have tried to provide the missing link between present day instrument flight and fully automatic flight utilizing automatic pilots and associated equipment. An instrument to provide the pilot with composite information, during the approaches and in regular flight, which

would tell him what to do about his position rather than where he is and in what attitude, has been lacking.

According to industry tests the Sperry Zero Reader is one of the more promising of the instruments designed for this purpose. It introduces a new concept of cockpit instrumentation which the pilot must be willing to accept if he is to gain the advantages inherent with the unit. In 78 instrument approaches—simulated and actual—with the Zero Reader at airports across the country, each approach brought the airplane into proper alignment for landing.

Some of the advantages are: (1) the pilot receives the benefit of a single instrument which provides him with a composite reading of the five separate flight conditions, (2) he gains the advantage of being able to "practice approaches" during all flight operations since the approach instrument can also be used in level flight, (3) anticipation required by use of the conventional cross pointer indicator is eliminated since the inherent characteristics of the zero reader enable it to do the anticipating, (4) smooth bracketing of the localizer and glide path range is assured without pilot effort since the instrument anticipates the aircraft's approach to the range and signals the pilot of his position before he overshoots.

How It Looks. The Zero Reader looks very much like a conventional cross pointer indicator but the face of the instrument is spherical and the needles eshaped to follow the curvature of the face. In addition to this, the localizer and glide path pointer are not pivoted but instead parallel their "zeroed" posi-



The Pilot's View—Cockpit units of the new instrument include the Zero Reader (top center), heading selector (top right) and the control switch (lower right). Final instrument arrangement will not include the signal flags on the zero reader. Notice that this system does not replace the cross pointer indicator but rather supplements it.

tion at all times and no flags are used to signal the pilot of a system failure as in the newer ILS instruments (See cut).

In operation the vertical needle of the Zero Reader receives signals from the localizer or omni-range receiver and mixes them with banking signals from an attitude gyro and with heading data from the gyrosyn compass. If any of the reference signals indicate that the airplane is not properly aligned the vertical needle moves away from neutral signaling the pilot that he should make a coordinated turn in the direction of the pointer movement. This will return the airplane to the course.



Coming In pictures taken from a DC-3 airplane at 200 feet altitude during two successive instrument approaches at Idlewild



Airport. Pilot was inexperienced with ILS and Zero Reader instruments. While the near perfection of the Zero Reader approach (right) is apparent, pilot had to abandon ILS (left) approach.

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The needle will center itself as soon as the attitude of the aircraft indicates that it will ultimately reach the desired track (See cut). That is, the instrument anticipates that the change in control position will bring the aircraft back on course and the needle returns to zero although the airplane is still off the chosen course. Thus with reasonable piloting skill the pointer will remain centered constantly and only adverse changes in the rate or angle of the displacement correction will be reflected in pointer positioning.

One of the most serious drawbacks of the conventional cross pointer indicator is that the pilot can seldom return to the course once he has strayed due to pilot error or unexpected conditions. This is largely due to the sensitivity of the localizer needle and the fact that it is incapable of coping with major displacements since the instrument has no sense of correction until the airplane is brought within the narrow confines of the course once more.

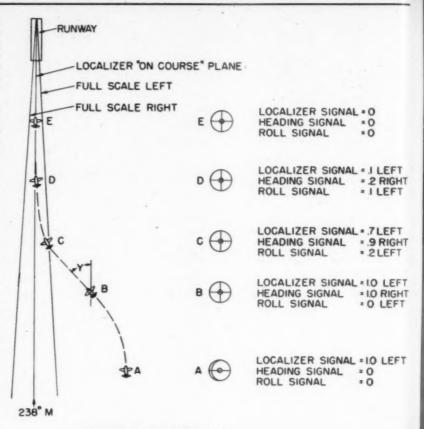
With the Zero Reader, as soon as the pilot directs the airplane in the direction of the localizer path the instrument will advise him when the rate and degree of displacement correction will return the ship to the on course position. This is effectively demonstrated by the comparative photos of the approaches made by a pilot inexperienced in both ILS and Zero Reader usage (see cut).

In a similar manner the horizontal needle of the Zero Reader mixes signals from the pitch indicating gyro and glide path receiver providing pitch and altitude information to the pilot by repositioning of the horizontal pointer of the Zero Reader.

All Purpose. The previous paragraphs have been devoted to the approach condition. However, this instrument may be used in all routine flight operations. The heading selector, an auxiliary unit, may be set to any desired compass heading and from then on the vertical needle will use this reference and provide the pilot with indications of the plane's position relative to it. If the heading necessitates a change in the aircraft direction a bank limiter in the amplifier will warn the pilot if the degree of banking is proper to provide alignment with the course or if it is dangerously steep.

Similarly, in flight the aircraft may be stabilized at any altitude, the altitude selector switch turned on, and the horizontal needle will provide this altitude as the reference with needle movements showing how to keep the airplane at the chosen level. A pitch limiting switch is also provided in the system.

Since the heading selector and the gyrosyn compass indicating needle are concentrically mounted in one instrument face it is possible to use the readings of these needles to determine the drift angle and cross wind values.



DECIMALS USED ABOVE REFER TO FRACTIONS OF FULL SCALE METER MOVEMENT

Approach Plotted—The position of the eirplane relative to the localizer (left) and the attitude of the aircraft (indicated by roll and heading signal at right) show that at "A" the aircraft would fail to align with the localizer. The vertical needle shows that the airplane must be flown to the left to insure alignment. In successive stages the degree of airplane displacement from the localizer is counteracted by the aircraft attitude so the Zero Reader is centered indicating the airplane is approaching the localizer in an acceptable manner.

The Zero Reader will not fly the airplane. It is not a primary instrument in that the other instruments must be constantly monitored by the alternate crew member to cover the possibility that one signal to the instrument may fail and composite indicating pointer will—not inform the pilot of the error. It will simplify training of pilots for instrument approaches, minimize pilot fatigue in long periods of instrument flying and may eventually permit the present ILS minimums to be lowered in relation to the increased proficiency of the pilot in interpreting the approach instruments.

### 2-0-2 Back In Service

CAB expects to hold the formal hearing covering the crash of Northwest Airlines' Martin 2-0-2 starting October 14 in Winona, Minn. Likelihood is that the three day meeting will provide considerably more information about the nature of the accident than has been dis-

closed at this time. The CAB investigators have not followed the same trends as the engineers from the manufacturer and the airline.

With a formal statement that the 2-0-2 surpassed the strength requirements of civil air regulations, Northwest placed the 24 airplanes back in service during the last two weeks as minor modifications were completed. These modifications consisted of enlarging the spar cap attaching fillet and increasing the number of bolts which attach the outer and center wing panel.

Martin's release indicated that the extensive testing by that company along with CAA, CAB, the NACA, NBS, Northwest Airlines, the Aluminum Company of America and others proved that the accident at Winona was the result of tornadic winds which existed in that area at the time of the accident and bore no relation to the structural integrity of the aircraft.

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### "We beg to differ, Dr. Johnson!"

"It came as a bit of a shock, sir, when we looked up 'service' in your famous Dictionary, to find your first meaning for it was—'menial office; low business, done at the command of a master'.

"No, Dr. Johnson, not even from you can such a statement go unchallenged!

"Service—in our book—is something altogether different. It's attentiveness, willingly and courteously given. It's the real pleasure we take in smoothing the path of travellers. It's making our passengers feel 'at home' above any of five continents.

"You see, most of your definitions couldn't please us more, sir. 'Element encompassing the terraqueous globe', for instance, is such a wonderfully important way of saying 'air'.

"But *please*, Dr. Johnson, won't you revise your meaning for 'service'. . . after your experience on this flight? Do ask Mr. Boswell to remind you".

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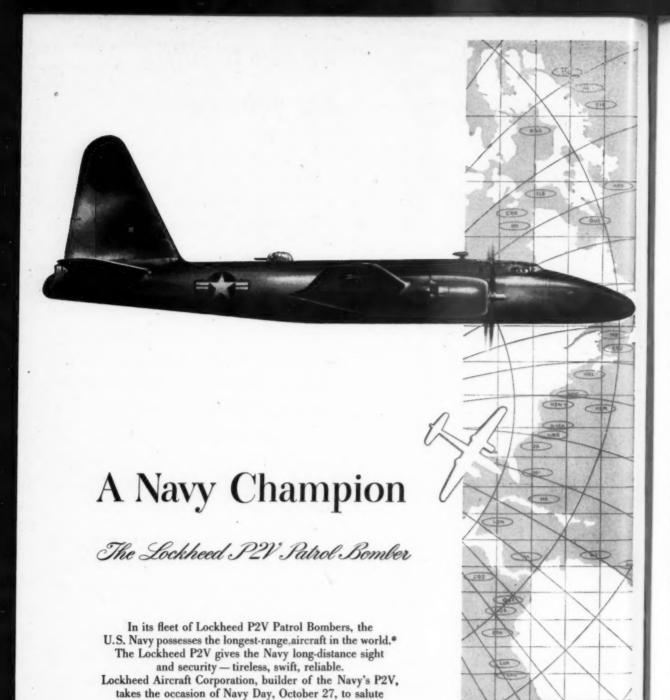
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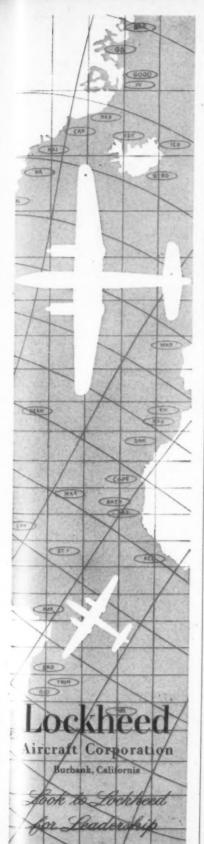
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#### -MAINTENANCE-

## TWA at LaGuardia

Trans World Airlines has moved the maintenance activities of its international fleet of DC-4s from New Castle Delaware to La Guardia Field. Some 45 maintenance, fleet and ground service workers will be transferred to New York while over 1,000 other employees plus 425 mechanics will remain in New Castle.

Until this time the DC-4's have terminated their overseas flights at La Guardia and were ferried to Delaware for all maintenance operations. These operations include successive inspections at 85 and 180 hours of flight. In November the same program will be extended to include the Constellations which have these same checks performed at 55 and 260 hours.

Engine changes and major structural inspection and overhaul will still be carried on at New Castle. Aircraft will be rotated into New Castle in such a manner that one will be undergoing major overhaul there at all times.

#### -SAFETY-

#### **Smoke Detectors**

The Mines Safety Appliance Co. has received official word that their monoxide sensing fire detector met the CAA recommendations set forth in technical standard order C-1. This was one of three detectors turned over to the National Bureau of Standards by the CAA (see American Aviation, Oct. 1) to determine if the units complied with the TSO as the manufacturers indicated they did. CAA would not disclose the results of the tests in regard to the other units until such time as the manufacturers of the detectors had had the opportunity to discuss the nature of the tests which were conducted on the units.

Indications are that two other units which operate on photo-electric cells did not meet TSO requirements but as yet there is no official word as to what CAA's action on this matter will be. These results will affect the tests now under way in the airlines under ATA sponsorship since all three of these units are involved in the tests.

#### **FSF Accident Course**

A course on aircraft accident investigation will be held by the Flight Safety Foundation at Woods Hole, Mass., Nov. 7-13. With the Woods Hole Oceanographic Institute as headquarters, the course will provide those in attendance with the basis for approaching accident investigation with the proper attitude. The course, which will cost about \$50 per student plus maintenance and transportation expenses, has been arranged in cooperation with the airlines, manufacturers and government agencies.

# SAFETY

THE OPERATOR, whether an airline or an individual, remains responsible for the quality of components used in aircraft repair. Most persons feel that the CAA maintains close watch on manufacture of such things as bolts, nuts, etc., and depend entirely on an AN number or other governmental specification for their assurance of quality. One airline recently had 50% of the close tolerance bolts holding the horizontal and vertical stabilizers of a DC-4 in place fail shortly after installation while the airplane was in the hangar.

Discrepancies in bolt manufacture accounted for the failures and CAA held it was a matter between the operator and the manufacturer or distributor. Typical features which may be seen without special equipment are the rockwell marks found on the end of the bolt indicating it has been hardness tested, dye marks on the shank indicating magnetic inspections, lack of sharp burrs on threads indicating quality of thread machining, forging lap on the shank indicating improper machining tolerances, sharp radius between the head and shank providing a potential hazard and minute cracks at the crest and roots of threads.

National Airlines recently found that a "B" nut connection on the DC-6 Co. fire extinguisher system had backed off at a point forward of the instrument panel. The emphasis placed on CO<sub>2</sub> control by recent discoveries of the dangers of this agent to the operating crew underline the importance of checking these connections under pressure at the first opportunity. System can be air checked but care must be exercised to isolate the bottles, otherwise they will be discharged by the air pressure on the control head.

When ignition vibrators are used on R-2000 engines the output of the vibrator enters the magneto through the switch wire. This is low tension current which is transformed within the magneto to higher voltage for aiding engine starting. In an attempt to check the output of the vibrators mechanics have disconnected the lead at the magneto and tried to check spark jumping there. Since the voltage is too low at this point for checking in this manner, the test is useless and the action in disconnecting the lead is identical to turning the magneto switch "on". Best point for checking vibrator action on these engines is on the high tension lead from the magneto to the harness proper at the harness end.

# **AERODYNAMICISTS** THERMODYNAMICISTS STRESS ANALYSTS AIRCRAFT DESIGNERS

North American Aviation has a number of excellent openings for engineers qualified in the fields listed. Salaries commensurate with training and experience. Please include complete summary of training and experience in reply.

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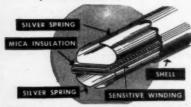
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#### **OPERATIONS-MAINTENANCE-**

-NEW EQUIPMENT----

#### **Greer Test Unit**

To meet the increasing need for pressurized aircraft test units Greer Hydraulics, Inc., has designed a portable test unit suitable for the Boeing 377, DC-6 or Lockheed Constellation. Equipped



with an electric motor the unit's compressor has a capacity of 400 cfm of free air at 10 psi. Instruments provide a constant reference to air flow, pressure and temperature and a mercury manometer is used to indicate the rate of cabin pressurization and provide leakage information. The unit is now in use by A. B. Aerotransport. Additional information available from Greer Hydraulics, Inc., Brooklyn, New York.

# Ratchet Assembly

A miniature ratchet assembly fitted with a large and small screw driver blade and adaptable to Reed and Prince



and Phillips headscrews is now available for 59c from Aero Tool Co., 16930 Avalon Blvd., Los Angeles 3, Calif. The tool is 3% inches long and has a ball end on the handle to prevent slippage with resultant damage to the hands. The off-set design of the ratchet screwdriver permits its use in confined spaces, and a reversing lever makes it possible to select the direction of drive rotation.

#### **New Heater Series**

A new series of Stewart Warner South Wind heaters has been approved by CAA for use in anti-icing installations on civil aircraft. The model 921 which has a heat output of 200,000 btu/hour has been approved for cabin heating as well as anti-icing applications. Additional information available from Stewart Warner Corp., 1826 Diversey Parkway, Chicago 14, Ill.

#### Fork Lift Truck

The Transitier, a gasoline powered fork lift truck, is being marketed by the Transitier Truck Co., 2477 N. W. 23 Avenue, Portland 10, Ore. Powered by



a 26 hp Cobra engine, the welded one piece unit is available in 1,000 and 2,000-pound lift capacity and with 5, 7 and 9-foot lift heights. Weight of the one-ton lift model is approximately 3,000 pounds. The Transitier features a 61-inch turning radius, pneumatic tires, hydraulically operated lift with tilting arrangement and a hydroflex clutch.

#### **Jackstacker**

An electrically-operated, telescopic forklift known as the Jackstacker is being marketed by Lewis-Shepard Products, Inc., 274 Walnut Street, Water-town 72, Mass. With capacities up to



4,000 pounds, the new unit is controlled by a handle type head and has two speeds forward and reverse. The lifting and lowering mechanisms are hydraulically operated and may be actuated while the vehicle is in motion. The Jackstacker features a hand-operated brake which is on at all times except when manually held off by the trigger type control. It is particularly useful for the movement and high stacking of materials on skid platforms, pallets, or in sectional bins.

Tough customer
YESTERDAY -

Tougher yet
TODAY

For the backbone of its air fleet the U.S. Navy traditionally puts its faith in aircraft types that have thoroughly proved themselves in service. Today, the battle-proved Vought Corsairs proudly serve as the Navy's front-line fighter-bombers. Advanced far beyond their wartime predecessors, highly developed models of the

F4U will continue to join the fleet well into 1949.

Meanwhile, a whole new generation of Vought airplanes is in the making. Right now they are going through the gruelling tests that will prove them for service with the fleet in years to come.

CHANCE VOUGHT AIRCRAFT

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# Chicago Plans Ahead

The best airport developments can be rendered obsolescent in no time unless tied in with a carefully planned air traffic control system. This month, the City of Chicago took steps to ensure that its comprehensive airport program would not suffer for lack of such a system.

With the permission of Civil Aeronautics Administrator D. W. Rentzel, the city employed Earl F. Ward, technical assistant in the CAA Airways Operations Service, to serve as expert in planning air traffic control for the Chicago area.

Granted an indefinite leave of absence from his CAA duties, Ward will work in the office of Ralph H. Burke, Chicago's airport consultant, studying and making recommendations on air traffic patterns and air traffic operations, both on the ground and in the air, for all Chicago airports and other airports in the Chicago control area.

Chicago's air traffic problems involve planes converging on the city along nine airways from all points of the compass. Its air traffic control center serves an area of about 400 miles in diameter with Chicago as the hub.

In Earl Ward, Chicago had found a man apparently possessing all the qualifications for dealing with its intricate air traffic control problems. He has been in aviation since 1917, and most of his experience has been in the field of operations. While serving as vice president of operations for American Airlines in 1935, he evolved an air traffic control system which was taken over in 1936 by the Bureau of Commerce. The basic elements of this system are still standard.

# **Luxury Port at Seattle**

Construction of the new \$4,000,000 administration building at the Seattle-Tacoma Airport is progressing rapidly. When it is completed, which is expected to be by June 1 next year, it will be one of the most up-to-date terminals in the west.

The building will have four stories and a mezzanine. The main structure will be 470 ft. x 105 ft. and in addition it will have two-story office and observation wings which will be 160 ft. by 16 ft.

The ground floor will be used for airline offices, customs, mail, express, baggage, heating equipment, food preparation and storage.

On the main floor will be the lobby for airline ticket offices and baggage room, a public waiting room 40 ft. x 180 ft., retail stores, and an observation deck along the entire field side.

The mezzanine will be used for office space, a waiting room balcony, coffee shop and soda fountain.

The second floor will be devoted to dining facilities and offices. The main dining room, which will have 5,280 sq.



Earl F. Ward
Becomes Chicago Airport Adviser

ft., will occupy the central area with foyer and lounge, rest room and checking facilities adjoining. Two private dining rooms will have a total floor space of 1,460 sq. ft. and club rooms will have 1,900 sq. ft.

Upper floors will house the weather bureau and other related facilities.

Apron in front of the administration building will have eight plane-spotting positions, each 150 ft. in diameter. They will be served by eight loading gates. Space is available for eight additional positions. The 907-acre Seattle-Tacoma Airport, which is 12 miles south of Seattle and 19 miles north of Tacoma, is operated by the Port of Seattle. It has four 150 ft. wide concrete runways. The north-south runway is 6,100 ft.; the northeast-south-west, 5,609 ft.; the east-west, 5,000 ft., and the northwest-southeast, 5,092 ft. Three more runways are to be installed parallel to the first three runways. The north-south runway can be extended to 9,000 ft.

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Northwest Airlines and Western Air Lines moved from Boeing Field to the Seattle-Tacoma Airport last fall, using temporary terminal facilities. Northwest completed construction of a hangar at the field last year.

United Air Lines, Pan American Airways and West Coast Airlines plan to move from Boeing Field to the Seattle-Tacoma Airport next year following the completion of the permanent terminal facilities. Both Pan American and United plan the construction of hangars.

Airport Landscaping: A new booklet prepared by the University of Illinois' Institute of Aeronautics deals with a subject—Landscape Planting for Airports—which has been practically untouched in literature. The author, Miss Florence B. Robinson, is associate professor of landscape architecture at Illinois. Her 32-page monograph, second in a series of service bulletins on aviation subjects to be issued by the Institute, stresses fundamental principles of landscape planting for airports but also goes into detail in listing suitable shrubs, trees and grasses for various airport areas. Copies available free of charge upon request from the University of Illinois, Urbans, Ill.



\$4,000,000 Layout—
This architect's drawing shows layout of \$4,000,000 administration building which is scheduled for completion at Seattle-Tacoma airport late next spring.

## Rate Rule Modified

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A second supplemental order affecting minimum air freight rates was issued two weeks ago by CAB.

Denying requests of Slick Airways and The Flying Tiger Line for rates below the 13-16 minimums on specific commodities, the Board held that the record does not support any lower rates. It said the directional rates phase of the Air Freight Rate Investigation Case would determine whether specific rates below the general minimums should be approved for the commodities in question, and that lacking convincing evidence "it does not appear appropriate to further modify minimum rates in this manner."

All carriers using specific commodity rates prescribed in the Board's rate order will be permitted to use such rates only until 30 days after final decision in the case, unless authority to extend such rates is specifically granted by the decision.

An appendix to the order listed specific points, commodities and rates permissible. Specific commodity rates of United Air Lines were allowed to be extended to new points requested by the carrier.

Pending investigation and decision in the case, CAB held that "all carriers may file tariffs establishing rules affecting minimum rates dealing with accumulation, assembly and distribution services on less than one day notice." Such rules, however, must conform with a set provided by CAB in an appendix to the order. At a later date, a hear-on the propriety and lawfulness of such rules will be held before a CAB examiner.

Carriers may continue such accumulation, assembly and distribution rules for only 30 days after final decision, unless CAB 'orders otherwise.

# **TWA Revises Cargo Loading**

An improved loading form and a revised load manifest for DC-3's which will save approximately three minutes per departure has been placed in use at all TWA domestic stations. Proper loading of the plane under the new system is obtained by utilizing the cargo loaded into the rear cargo compartment to balance the plane.

The new form consists of two tables. One specifies the permissible minimum and maximum loads for the rear cargo compartment with a given number of passengers and a given total cargo load aboard, while still allowing unrestricted passenger seating. The other specifies increases which are allowed in the maximum rear cargo load provided certain seats in the plane are blocked.

TWA's present plans are to change over to the tabular type loading form on other model aircraft in the near future, which will result in further savings in manpower and form-printing costs.

The new load manifest, only work



# Capt. Anson L. Johnson Wins 1948 Thompson Trophy

Captain Johnson, a member of National Airlines' highly skilled and efficient flight personnel, demonstrated persistent, champion-like performance in winning the coveted blue ribbon award of aviation at the National Air Races

Behind this accomplishment are more than 5,000 hours of air experience both as an Army Air Force transport pilot on world-wide routes and as a pilot for commercial airlines.

National Airlines salutes Captain Johnson for his victory, pays tribute to his skill and experience, takes pride in these fine qualities, so symbolic of its entire flight personnel

NC



FOR SALE

.....

DOUGLAS

DC-4

**AIRPLANES** 

—by a
domestic scheduled
air line

- Equipped with P.&W. R-2000-I3 (2SD13G) Engines.
- In good condition, having been carefully maintained in accordance with highest standards for scheduled air line service.
- Available for delivery within ten days of date of sale.

These were low-time military transport airplanes, completely rebuilt and modernized for scheduled commercial passenger service. Standard seating arrangement for 50 passengers. Available for immediate inspection.

Complete information, together with a very attractive quotation, available immediately upon request.

> Address all inquiries to P. O. Box No. 1368 Grand Central Station New York 17, N. Y.



Auto Goes Flying—A French-built Renault automobile, first to arrive in the Midwest, is unloaded from a United Air Lines cargo plane at Chicago Municipal Airport onto a raised cargo lift truck following its flight from New York. Twenty of the small sedans were shipped to Chicago, and UAL cargo handlers found they presented no unusual problems of loading, securing or unloading.

sheet needed to record aircraft weight and balance, presents the required information in a more convenient layout that facilitates not only the completion of the form but also the transmission of the flight movement report. Croschecking of weights has been simplified to the extent that each step in the computation of the form may be checked without duplication of effort on part of the control agent.

The improvements are a joint development of the weight and balance group in the base engineering section at the Kansas City overhaul base and the ground service section at Kansas City Municipal Airport.

Airfreight Film: A 16-mm. soundcolor film depicting the operations of
an air freight line has been produced
by employes of Slick Airways and will
be used to stimulate interest in shipping
by air. Titled "The Story of Airfreight,"
it includes scenes shot at various stations on Slick's transcontinental and
north-south routes. It has a 22-minute
showing time. Prints for showing before civic and trade groups are available through Slick Airways division
managers at New York, Chicago and Los
Angeles, or from the line's general offices in San Antonio.

PAA Cargo Rate Cut: Pan American Airways has again reduced cargo rates for volume shippers under a new tariff schedule effective between four U. S. gateway cities and Mexico and Central America. Savings to shippers result from a new classification in cargo under which shipments weighing over 500 pounds carry a rate almost 50% lower than that for small consignments. Previous volume break was at 10 pounds.

# EVERY ENGINE EVERY TIME— START WITH

STARTERS FOR RECIPROCATING ENGINES ranging from 165 h.p. up through 4000 h.p.

STARTERS FOR JET ENGINES ranging from 3000 lbs. thrust up through 6000 lbs. thrust

For over thirty years Eclipse has continued as one of the leaders in aviation progress by anticipating your needs for constantly better, more efficient aircraft engine starters. Now Eclipse offers you such important advantages as the QUICK-DISCONNECT which cuts mounting time to a small fraction of that formerly required. Another Eclipse development for large engines is the HYDROLOCK DETECTOR attachment, which turns the engine over slowly at the flip of a switch, doing away with the job of "pulling through" by hand. In addition, there are Eclipse starters built to the unique requirements of jet engines, rotary wing aircraft, AC and 115 V. DC current applications. Let Eclipse experience work for you. Start every engine every time—with Eclipse.

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# TWA Pushes 'QV' Campaign To Boost Winter Travel

If planning, effort, and thoroughness pay off in the sales department, TWA's 1948 "QV" campaign, just now getting set to shift into high gear, should turn out to be one of the most rewarding sales promotions ever attempted by any airline.

Idea of the campaign, initiated last year on a much smaller scale, is to sell business and professional men and others needing or desiring a fall or winter vacation on the advantages of taking a "Quickie Vacation" to the Sun Country—Arizona, Nevada and Southern California—making use of TWA's fast and frequent Constellation schedules to get there and back in a minimum of time.

Last year's campaign convinced TWA that a planned promotion could send load factors up at the time, when, historically, they tend to plunge downward with the temperature—in the fall and winter months. Accordingly, it was decided that the company would go all out in its 1948 "QV" campaign, enlisting just about all the known advertising media, all TWA traffic and sales personnel, and the airline's aproved travel agents.

This week key TWA sales officials conclude a series of pep talks before some 1,200 agents and hundreds of TWA traffic representatives.

Using All Media. The stepped-up advertising campaign which has already begun and which will carry over well into the winter season overlooks no

bets in getting the "Quickie Vacation" story over to the public.

Among the media employed are: full-page color ads in Holiday magazine; ads aimed at the business men who read such publications as Time, Fortune, Business Week, and AMERICAN AVIATION; ads slated at the travel trade through Travel Agent magazine, Official Airlines Guide and others; ads in newspapers of key cities; "teaser" ads in newspapers in the smaller cities on TWA's system, and a series of hard-hitting radio commercials.

On top of all this newspaper, magazine and radio advertising, the "QV" campaign features a direct mail avertising campaign in which, among other things, some 460,000 mailings will be made to select lists of doctors and dentists, lawyers and bank presidents, sales managers and executives of leading corporations. Also being used are special window display units for the use in TWA ticket offices, travel agencies and department stores. Posters, counter cards, window stickers, QV lapel buttons; miscellaneous folders and stuffers are among the other means being used to publicize vacations in the Sun Country.

And, of course, TWA's color movie in the Southwest, "Flight to the Sun," which already has been seen by 85,000 persons, will be shown before as many groups as possible while the campaign is on and probably will be televised over several stations as well. Role of Agents: A special feature of the campaign is the extent to which travel agents will participate. The advertising directs the traveler to the travel agent where possible, and special TWA reservations agents have been assigned during the "QV" campaign to handle agents' business exclusively.

Window displays, posters and other advertising material have been made available to the travel agents, and arrangements have been made for them to use TWA's teletype facilities into Phoenix should they have difficulty booking hotel and resort space.

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Just how important the agents are was suggested by Wally Ford, assistant manager of agency and interline sales, who said recently that if travel agents maintain the pace set during the first six months of the year, they should collect more than \$15,000,000 in revenue for TWA during 1948, and might easily exceed this figure through plugging "Quickie Vacation" sales.

# **PAA Sleep Gets Cheaper**

Pan American Airways, effective Nov. 1, will reduce its trans-Atlantic berth surcharge from \$100 to \$25. Approximately five sleeper flights per week will be offered on PAA's non-stop schedules between New York and London. Taken together with the winter trans-Atlantic excursion fares which went into effect Oct. 1, the reduction in the berth charge will cut the cost of PAA's round-trip Constellation sleeper service between New York and London to below \$500.

Scandinavian Airlines System in August had reduced its sleeper surcharge from \$125 to \$45.

#### -NEW SERVICES-

Pan American Airways' winter schedule, effective Oct. 15, in addition to providing first direct service from U. S. to Barcelona, Spain, will include increase from two to three round-the-world flights each week; resumption of non-stop service from New York to London, and a later increase in through service between N. Y. and Johannesburg, South Africa.

Southwest Airways has inaugurated service to Crescent City, Calif., under CAB approval of application for exemption to include the point temporarily as intermediate stop between Eureka, Calif., and Medford, Ore.

Trans World Airline has inaugurated a new daily transcontinental Constellation flight between Washington and Los Angeles, via Dayton, Chicago, Kansas City, Albuquerque and Phoenix.

Wisconsin Central Airlines on Oct. 1 began serving Green Bay, Wis., through Austin-Straubel Field. Green Bay is receiving three flights daily, one northbound and two southbound, with more schedules to be added later.



QV Pep Talk—A Trans World Airline sales team describes to travel agents at St. Louis the TWA campaign aimed at selling the idea of a "Quickie Vacation" to the southwest Sun Country this winter. The TWA group, standing left to right, is composed of Walter A. (Welly) Ford, Kansas City, assistant manager of agency sales; Vernon L. Gunn, Chicago, manager of sales promotion for the central region; and Jack Burlington, Kansas City, assistant manager of passenger sales. Similar meetings were held from Sept. 20 through Oct. 15 at Kansas City, Pittsburgh, Philadelphia, Washington, Chicago, Los Angeles, San Francisco and New York.

# WAL's Meals-on-Ground Prove Popular, Economical

By FRED HUNTER

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Western Air Lines is experimenting with meals on the ground rather than aloft on certain selected flights and is finding the results quite interesting.

First, it is effecting substantial savings in food costs; second, it is finding passengers rather like the idea. The latter was in the nature of a surprise. It all started nine months ago when

economy-minded Western took note of the installation of a small, but moderntype restaurant at the airport at Scottsbluff and discovered it was turning out pretty good meals. Western had an Inland division schedule from Denver to Minneapolis that posed an individual food problem and this trip happened to hit Scottsbluff at lunch time.

Western had some apprehension about putting in a 30-minute meal stop at a relatively small point like Scottsbluff for fear that passengers might complain about the lost half hour. Strange as it may seem, the reaction was the opposite.

To many of the passengers the 30-minute stop represented an enjoyable interlude to break up a trip. To others the well-served lunch in the restaurant balanced off the extra time.

After three months, Western was sufficiently encouraged to schedule meal stops on four flights through Salt Lake City and add a breakfast and a dinner to the luncheon experiment. Western formerly operated the restaurant at the Salt Lake City Airport, but has since sold it.

History repeated itself in the Salt Lake City experiment and Western's latest meal stop is Great Falls, Mont., where the passengers of two flights lunch in an airport restaurant recently opened.

Western Air Lines now is serving an average of 125 meals a day on the ground in airport cafes and plans to extend the program to other points where restaurant facilities dovetail with schedules. Billings, Mont., where the airport has a restaurant, probably will be the next one. The airline has several schedules where it would like to switch from service aloft, but is unable to do so because of the lack of suitable airport restaurants.

No Wastage. The passengers are Western's mealtime guests on the ground just as they are aloft. Where Western gets its greatest economies is in the elimination of wastage.

Average cost of the meals on the ground to Western is \$1.50. A full-course lunch or dinner is the standard fare. But if a passenger has a light appetite, wants only a salad or sand-



"Spill-Proof' Cup—Continental Air Lines traffic representative at Denver, and Marie Slauson, CAL hostess, compare the old style paper drinking cup with a new "spill-proof" cup developed and patented by Kramer. The new cup features an adjustable lid which can be closed over the mouth of the cup with just enough aperture left for drinking. Tested aloft on Continental flights with encouraging results, the cup will be produced by a large paper cup manufacturer. It is expected to find favor with many airlines and transportation companies.

wich, Western profits because it pays only for what is served.

Through a very tight control system Western reduced its volume of unused meals on its airplane from 26% to 15.2% during the last two years. But there are no unused meals on the ground so this 15.2% wastage is eliminated at the start.

A further economy is the saving in lost and damaged flight food service equipment. All told the on-the-ground meals cost just half the cost of meals aloft, according to Marvin Landes, v.p. of passenger service for Western.

Western's experiment admittedly is at smaller cities where the restaurant volume is not too great and Western doesn't have a multiplicity of trips to be handled at one time. Moreover, the cost of living being somewhat less in Western's meal towns than in the larger cities, pretty high quality meals can be kept within the average of \$1.50.

# **Faster Bag Handling**

Hawaiian Airlines has instituted a new baggage handling procedure which has speeded up the delivery of baggage to their passengers and resulted in a saving in manpower.

Under the new procedure, baggage is accepted at the passenger's point of origin and is weighed in the usual manner with customary charge being made for any excess. No claim check, however, is given to the passenger. On arrival at a particular station, the baggage destined for the station is removed from the airplane and placed on a bench accessible to the passengers as they come from the airplane through an enclosed baggage distribution area where the passenger then picks up his own baggage.

Travelers in Hawaii usually carry a considerable amount of baggage as is indicated by the proportionately large volume of excess baggage carried by Hawaiian.

The average time from the arrival of the airplane at the ramp for the delivery of all baggage to the disbursing rack is approximately three minutes and the time for all baggage to have been picked up by the arriving passengers seldom exceeds six minutes.

Hawaiian Airlines has found that the claims for lost baggage have been no greater in the period of the two months during which the new system has been in use than were the claims under the old system and are inclined to believe that, if anything, there is less lost baggage than before.

Another innovation which is a part of the baggage handling system is the use of unprinted, standard-size, colored tags instead of the large-size baggage printed tabs which had been formerly used. The new tag has no printing on it and the distinctive color identifies the station of destination Tour agencies and other organizations who have large parties traveling at one time expedite claiming of baggage by tour conductors with the use of distinctive tags which they place on each piece of baggage belonging to their particular group.

Policy on Children: Trans-Canada Air Lines now accepts as passengers on its domestic flights unaccompanied children between the ages of two and 12, provided they are accompanied to the airport by parents or other responsible adults and assurance is given that they will be met at their destination. TCA has been carrying unaccompanied children on its trans-Atlantic routes and connecting flights for some time and has found that the additional demands made on traffic and passenger service staff were not heavy.

Free Limo Rides: National Airlines now absorbs ground transportation costs between New York International Airport and other N. Y. airports for passengers arriving on National and having to make connections.

Clothing Limit: "Can I pack all the clothing I will need for my trip and still stay within the free baggage limit of 40 pounds?" A new air travel folder being distributed by United Air Lines seeks to answer this question for women air travelers by itemizing a normally adequate wardrobe that does not exceed the free limit.

# Cost Principles Still Lacking In Military Plane 'Contracts'

Manufacturers who have been fortunate (or unfortunate) enough to obtain contracts from the armed forces under the defense expansion program have been placed in the peculiar position of having to start work on what amounts to, in some cases, hundreds of millions of dollars worth of aircraft or components without any definite knowledge of what costs will be considered allowable by military auditors.

Although the two air services have announced, in recent months, "contracts" totaling more than \$2,000,000,000, these "contracts" are actually only letters of intent and no contracts have been signed as yet. This is due to the failure of the services to complete a new set of auditing regulations called "Statement of Contract Cost Principles" which will list in detail those items which the government considers legally allowable production costs, and as such chargeable to the government.

When the old War Powers Act expired during the first part of May, the old auditing regulations became obsolete. The new set of rules had been under study for months, and on June 22, the second and "final" draft was prepared. This draft was generally acceptable to the manufacturers, and on the basis of it, they were told they would have their contracts "formalized" by July 1.

The contents of the draft became known to outside interests and a parade of trade associations, bankers, insurance executives, publishers and labor advisers descended upon the Pentagon to urge modifications that would benefit their particular interests. Assistant secretaries, Munitions Board members, procurement officers and service auditors were besieged with requests for insertions of special clauses in the draft. As a result of all this outside pressure, a number of modifications were made.

The services have now, three and onehalf months later, come up with the sixth draft, which is expected to be completed "in a couple of weeks." Meanwhile, nervous contractors are turning out planes and wondering what form this all-important document will finally take.

# **Echols' Resignation Final**

The Board of Governors of Aircraft Industries Association has accepted the resignation of Oliver P. Echols, president of the association for the past 21 months. Echols was a war-time procurement official with the Army Air Forces as a major general. The execu-



Engine Container—Edo Corp.'s elastic jet engine container, developed for the Navy. In actual tests, when subjected to an impact of 47 times the weight of the engine inside the container, the container was able to reduce the actual impact on the engine itself to 8.3 "G".

tive committee of AIA, composed of J. Carlton Ward, William Allen, Eugene Wilson and H. M. Horner, will pick his successor.

# Two Connies for the Navy

The Navy has awarded to Lockheed Aircraft Corp. a contract for two Constellations, to be purchased out of 1949 funds. The contract was included in the original purchase request of \$653,635,000 approved by Defense Secretary Forrestal and the President in June. Navy officials would not comment on the purpose for which the planes would be used.

# **Boeing Workers Return**

Boeing Airplane Co.'s Seattle (Wash.) plant is rapidly recovering from the effects of its 140-day strike. The company is now planning to inaugurate a third shift to handle its increased work load under civilian and Air Force expansion contracts.

The strikers have been returning to work gradually since Sept. 13, when they voted to accept the company's offer of a 15-cent-per-hour pay increase, previously refused. Boeing had hired more than 8000 hourly non-union workers and had increased its total employment to more than 12,000 when the strike ended. The increased work load will permit the company to retain its non-union help on the payroll and also re-hire all of the strikers. A number

of the strikers, however, are reported to have found work elsewhere during the strike. Even so, Boeing appears headed for a new post-war employment peak.

## Edo 'Shock Absorber'

Edo Corp. of College Point, N. Y., has developed a jet engine shipping container with built-in "shock absorbers," capable of reducing a 47 "G" exterior load to an impact of only 8 "G" on the engine itself. The container, designed under contract with the Navy Bureau of Aeronautics, is made almost entirely of aluminum and consists of three basic elements: an engine stand, a moisture barrier and an elastic cage.

The engine stand itself, mounted on wheels, is built of bolted aluminum members and can be used as a work stand or a run-up stand. Four shock struts protect the engine against rough ground handling. The moisture barriers, designed to maintain a low relative humidity, are in the form of light weight aluminum "barrels" which completely encase the engine, permitting equalization of atmospheric pressure through an orifice filled with silica-gel. A static charge of about 50 pounds of silica-gel is used to protect the engine from corrosion, thus reducing maintenance costs.

The elastic cage is the outer covering of the container. The cage consists of two sections, each side of which is made up of a series of horizontal aluminum bars of a desirable elasticity. The cage stands on skids located at each end, while the weight of the engine is suspended from the center. This arrangement permits large shock absorbing deflections of the cage and resultant easing of impacts on the engine.

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The entire container weighs about 1000 pounds less than wooden shipping crates now in use. Company officials believe it has a number of commercial applications and military personnel believes it might solve what has been a fair-sized problem—the shipping of jet engines over long distances.

Malcolm P. Ferguson, president of Bendix Aviation Corp., has been elected chairman of the East Coast Aircraft Manufacturers Council of the Aircraft Industries Association. J. S. McDonnel, president of McDonnell Aircraft Corp. was named vice chairman. Ferguson succeeds J. Carlton Ward, Jr., chairman of the board of Fairchild Engine & Airplane Corp.

Ray O. Ryan, for the past two years assistant division manager of Consolidated Vultee Aircraft Corp.'s Fort Worth Plant, has been promoted to division manager. He has served with Convair in various capacities since 1936 and before that was with Douglas Aircraft Co. at Santa Monica.

# **U. S. Domestic Airline Traffic for July**

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inland ICA Sational Sorthwast Sorthwest	7,192 29,408 15,008 31,511 68,405	2,665,000 8,658,000 7,574,000 6,211,000 36,830,000	3,973,000 14,823,000 24,319,000 11,814,000 64,810,000	67.0% 58.4% 31.1% 52.5% 56.8%	8.050 23.770 27.121 6.554 160.957	4,614 16,049 25,470 7,107 144,170	8,634 27,403 34,732 15,740 154,838	276,346 896,723 859,188 584,348 3,991,426	418,607 1,521,330 3,430,474 1,190,494 8,216,534	66.0% 58.9% 25.0% 49.0% 48.5%	197,794 738,116 561,377 361,702 1,763,506	197,794 727,818 560,234 367,959 1,767,690	100.05 99.95 99.55 95.15 98.35
TWA United Nectors	196,567 25,288	78,616,000 119,766,000 10,260,000	128,433,000 182,936,000 17,287,000	61.25 65.45 59.35	539,111 738,711 38,187	405,647 514,413 22,583	669,067 1,503,548 41,659	9,181,531 14,245,192 1,085,100	15,778,010 26,354,354 2,237,474	58.1% 54.0% 48.5%	4,842,417 5,480,290 583,935	4,753,400 5,475,676 576,658	99.44 98.55 99.75
TOTALS	1,110,963 • Figure	552,831,000 not yet avails	966,499,000	57.1%	2,767,718	2,161,314	5,210,167	63,302,453	129,443,217	48.95	29,894,120	29,673,252	99-19

# **U. S. International Airline Traffic for July**

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d S Colonial	1,453	968,000 1,165,000 1,500,000	1,962,000 2,509,000 3,578,000	49.74 46.44 41.95	204 628* 3,063	137		6,009 7,787 31,407	103,726 135,114 190,182	258,362 370,012 409,999	40.15 36.55 46.35	43,359 57,304 64,516	44,729 57,304 64,516	96.9% 100.0% 100.0%
Mational Forthwest Panagra	2,977 2,620 7,687	881,000 5,034,000 8,339,000	2,150,000 9,425,000 15,356,000	40.9% 53.4% 54.3%	934 142,377 18,411	16,171 31,603	13,711 5,075 151,317	132,962 2,576	830,253	320,172 1,489,213 2,059,419	32.6% 55.7% 54.6%	388,440 574,601	41,476 385,785 479,725	96.36 99.96 94.96
Pan American Latin Amer Atlantic Pacific Alaska	62,150 12,376 7,337 3,502	49,952,000 31,531,000 22,751,000 3,296,000	92,850,000 46,711,000 33,501,000 6,416,000	53.8% 67.5% 67.9% 51.3%	204,407 219,108° 291,085 34,828	60,311 40,048 19,879	1,359,488 414,120 311,715 300,088	36,808 131,823 5,162 36	4,264,769	12,986,031 6,745,597 4,748,516 1,333,173		2,467,460 1,353,934 1,333,115 229,442	2,476,773 1,164,131 1,293,018 219,477	98.9% 98.7% 99.8% 100.0%
TWA United	2,188	27,851,000 5,251,000	46,176,000 6,542,000	60.3% 80.2%	200.790° 31.776	79,204	379.214 10.797		3,758,848 579,949	6,399,140 728,607	58.7% 79.6%	1,275,656	1,150,413	98.79
TOTALS	121,595	186,135,000	311,547,000	59.7%	1,264,102	265,172	3,235,889	502,457	24,921,010	44,101,775	56.5%	9,012,149	8,614,218	98.79
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# **U. S. Feeder Airline Traffic for July**

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All American Challener Empire	2,675	652,000 482,000	2,402,000	27.1% 26.1%	3,395 3,209 1,823	3,499 2,132 878	3,803	6,894 74,523 42,284	37,867 224,185 55,053	18.25 33.25 31.55	163,567 126,444 87,794	165,456 128,650 87,792	98.36 98.36 99.06
Plorids Monarce Piedmost	959 3,342 5,594	129,000 826,000 1,306,000	544,000 2,762,000 4,117,000	23.7% 29.9% 31.7%	648 2,499 2,018	224 1,993 1,413	11.755	13,206 99,232 129,467	59.577 259.555 409.500	22.15 38.25 31.75	68,088 153,432 194,907	69,006 154,718 197,656	98.65 99.15 98.65
Pioneer Southwest Trans-Texas	8,894 10,692 1,957	2,420,000 1,886,000 489,000	7,946,000 4,778,000 3,922,000	30.46 39.46 12.46	6,301 3,650 2,762	1,773 2,752 680	3.941 5.714 435	224,822 201,273 46,590	842,064 478,736 364,981	26.7% 42.0% 12.7%	331,000 227,861 186,776	331,452 232,314 189,162	99.09 97.09 98.79
West Coast	8,659	1,096,000	2,435,000 728,000	45.0% 36.2%	868 996	1,128		97,876 26,594	239,481 77,308	40.8% 34.4%	122,231 82,654	121,894 87,925	99.35
TOTALS	46,429	9,550,000	71,480,000	30.36	28,169	17.915	26,686	962,759	3,048,307	31.56	1,744,754	1,766,025	98.44
Los Angeles					2,604	icepter No	il Service	2,604	8,096	32.15	26,032	26,114	90.25

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# U.S. Domestic Airline Revenues & Expenses for July

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American Braniff Capital Caribbean C & S	\$ 7.679,377 1,076,170 1,977,636 55,035 762,555	\$ 6,929,316 977,229 1,519,378 36,857 547,206	\$ 397,573 \$2,662 246,837 15,782 176,517	\$ 142,245 19,986 37,510 16,377	\$ 332,125 16,799 82,399 1,139 12,610	\$ 64,618 8,073 10,444 188 4,976	1,593 10,674 20,900 1,035 3,463	\$ 7,954,960 1,080,931 1,911,169 49,602 699,944	\$ 3,824,745 514,324 868,545 22,488 315,422	\$ 4,130,215 566,607 1,042,624 27,114 384,522	\$ -75,583 -4,761 66,467 5,433 62,611
Colonial	361,550	251,260	103,767	1,824	1,349	2,596	225	294,441	128,307	166,134	67,105
Continental	446,582	311,592	120,462	2,962	4,719	2,430	342	389,605	164,662	224,943	56,977
Delta	1,151,736	839,101	254,100	19,847	30,502	8,632	330	1,083,477	472,576	610,901	68,255
Eastern	4,745,749	4,368,847	148,520	71,203	87,654	57,203	2,730	4,866,316	2,558,625	2,307,691	-120,567
Hawaiian	412,473	363,422	1,766	10,655	26,098	8,432	1,847	356,737	153,618	203,119	55,737
Inland	201,353	149,357	46,508	1,786	1,974	1,260	2,036	174,061	76,493	97,568	27,291
MCA	605,632	503,500	82,476	5,919	6,563	4,148		592,365	260,903	331,462	13,267
Sational	546,387	459,684	58,553	5,786	7,517	8,695		778,948	427,054	351,894	-232,561
Fortheast	463,244	386,897	65,452	2,877	4,911	2,576		456,227	219,287	236,940	7,017
Forthwest	2,289,417	2,059,480	116,239	46,107	36,855	17,326		2,381,528	1,056,918	1,324,610	-92,111
IVA	5,193,131	4,460,716	347,366	140,410	155,359	52,453	3,635	5,825,465	2,626,687	3,198,778	-632,334
United	7,701,346	6,642,987	446,418	179,910	293,966	62,977	9,477	7,752,000	3,490,281	4,351,719	-50,654
Vestern	651,434	573,878	40,142	9,483	10,443	4,819	12,248	743,485	310,319	433,167	-92,051
TOTALS	36,520,807	31,380,707	2,709,100		1,112,942	322,046	76,512	37,391,261 ne data are tenta	17,401,253	19,990,008	-870.454

# U.S. International Airline Revenues & Expenses for July

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American Amer. O'Seas Braniff	\$ 337.040 2,555,244 163,813	\$ 276,487 1,969,733 77,499	\$ 6,510 386,404 83,884	\$ 4,540 42,564	78,943	\$ 29,549 620	\$ 4,025 33.873 1.634	34,000	\$ 333,058 1,899,283 197,838	\$ 182,267 948,729 111,345	\$ 150,791 950,554 86,493	\$ 3,983 655,961 -34,024
C & S Colonial Eastern	110,856 124,855 78,512	65,172 92,158 71,107	42,280 27,269 2,297			3,167 4,829 4,177	224 599 930		113,809 136,278 88,056	55,562 55,477 42,748	58,247 82,801 45,308	-2,953 -13,423 -9,544
National Northwest Panagra	68,691 987,690 1,199,902	57,632 460,434 858,164	4,196 420,092 95,030	36,934 69,519	5,558 2,030 107,775	99,966	1,305 9,482 30,160	457	77,305 846,931 1,267,341	36,473 399,904 550,884	40,832 447,027 716,457	-8,614 140,758 -107,483
Pan American Latin Amer Atlantic Pacific Alaska	5,390,454 3,669,735 2,879,705 486,395	3,374,860 2,712,810 1,518,591 246,540	941,662 <sup>(1</sup> 365,012 <sup>(2</sup> 1,097,736 <sup>(3)</sup> 163,813 <sup>(4)</sup>	158,889 118,529 53,134	636,987 246,578 160,314 67,875		106,748 66,518 26,706 1,319	43,185 134,003 5,016 6,456	4,965,560 3,363,245 2,704,793 457,550	2,031,592 1,833,226 1,424,664 205,939	2,933,968 1,530,019 1,280,129 -251,611	424,894 306,490 174,912 28,844
TWA United	3,470,517 332,614	2,511,465 291,496	535,891 23,938	161,953	172,657 5,748		74,697 4,308	19,223	3,857,464 258,993	1,829,366	2,028,098 114,175	-386,947 73,621
TOTALS	are establ 2) Temporary 3) Temporary 4) Setimate o	shed. Retimentes in effectes in effected temporal in above ta	4,196,014 immte of amounte exceeds por tt exceed esti- t exceed esti- ty rates in a mulations were a. Figures fo blavane: Colo	rmanent rate mate by \$20 mate by \$10 ffect by \$5 compiled by r American	n under revi ,784. ,247. ,394. American Addition inc.	es by \$500	ications fr	on monthly re	ports filed h	the airlines	mniff to Sout	11

# U.S. Feeder Airline Revenues & Expenses for July

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All American Challenger Empire	\$ 90,733 Report not 56,725	•	89,471	\$ 1,274 be given at 210	a later da	•	8	\$ 91,157 70,582	\$ 49,780 33,346	\$ 41,377 37,236	\$ _423 -13,858
Florida Monarch Piedment	31,394 115,610 193,341	7.097 42.941 74.934	24,168 69,044 116,936	34 613 584	2,609	29 207 557	16	59.770 126,407 147.540	27,943 69,716 85,804	31,827 56,691 61,736	-28,376 -10,797 45,800
Pioneer Southwest Trans-Texas	282,621 217,060 127,337	124,684 93,643 24,093	148,950 120,228 102,669	533 1,051 ·22	1,130 1,775 353	684 292 42		260,129 201,946 124,563	142,439 104,525 70,257	117,690 97,421 54,306	22,492 15,113 2,773
West Coast Wis. Central	105,266 65,230	61,771	42,859	562 482		214 129		a 121,964 84,638	60,785 40,508	61,179 44,130	-16,697 -19,407
TOTALS	1,285,317	464,563	798,635	5,365	6,198	2,226	619	1,288,696	685,103	603,593	-3,360
Lec Angeles	32,540		32,540	Heli	opter Mail	Service		29,153	19,178	9.975	3,387
	MOTE: These f	gares are take	en from month	ly reports	iled by the	airlines w	th CAB. Th	data are tental	ive and subject	t to later o	ange.

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For DC-3 and P. & W. R-1830 parts, accessories and components, contact:

M. E. Everhart, Stores Dept., United Air Lines, Municipal Airport, Cheyenne, Wyoming. Telephone Cheyenne 3931.

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C. D. Stowell, Stores Dept., United Air Lines Maintenance Base, Bayshore Highway, South San Francisco, California. Telephone Juno 8-2424.

Prompt delivery. Guaranteed to be as represented.



# Classified Advertising

The rates for advertising in this section are as follows: "Help Wanted," "Positions Wanted," "Aircraft Wanted or For Sale," and all other classifications \$1.00 a line, minimum charge \$4.00. Estimate bold face heads 30 letters and spaces per line; light body face 40 per line; box numbers add two lines. Terms, cash with order. Forms close 20 days preceding publication date. Rates for display advertisements upon request. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1025 Vermont Avenue, NW., Washington 5, D. C.

#### FOR SALE

Three At-6's. Perfect condition. Licensed. Low time on engines and airframes. Aero Sales Company, 210 Front Street, Hempstead, Long Island, New York. Hempstead 2-8117.

Excellent converted AT-11. Executive type interior. Hydromatic propellers. Priced right. Write for details. F. J. Tolley, SPAR-TAN AERO REPAIR, Municipal Airport, Tulsa, Oklahoma.

We announce new books—Flight Dispatcher (Zweng) \$4.00; Link Instructor Rating \$4.00; Flight Navigator Examination included in "Aeronautical Training" price \$3.00; Flight Engineer Manual \$4.00; (Free Catalog) and listing of War Surplus sextants. Compasses. Chronometers. Clocks, Astro Compasses. Aerial Cameras. etc. Pan American Navigation Service. 12021-R7 Ventura Blvd., N. Hollywood. Calif.

DELUXE 23-PLACE CATALINA (PBY5A).
A-1 CONDITION. NEW ENGINES. WRITE
OR WIRE P. O. BOX 1891, LONG BEACH,
CALIFORNIA.

Allied Radio Catalog: Allied Radio Corp. 833 West Jackson Blvd., Chicago 7, Ill., is distributing a new 1949 radio catalog containing 180 pages of listings of electronic tubes, test instruments, transformers, resistors, condensers, rheostats, relays, switches, rectifiers, etc.

#### POSITIONS WANTED

AERONAUTICAL COMMUNICATIONS—10 years experience in administrative, technical and operational fields in domestic, military, and international airlines. Prefer position with domestic firm. Box No. 636, AMERICAN AVIATION, 1025 Vermont Avenue, N. W., Washington 5, D. C.

#### ECA Needs Air Adviser

The Economic Cooperation Administration is seeking a top-flight aviation man to become civil air adviser to the ECA aid mission to Greece and adviser to the Greek government on aviation matters. Basic qualifications include thorough operations experience with an airline. Experience with government aviation work and policy-making is desirable. Salary will be commensurate with the qualifications.

The job is expected to last through duration of the Marshall plan, although a well-qualified executive might remain permanently as aviation adviser to the Greek government.

Inquiry should be made to ECA's Personnel Dept., Third Floor, 800 Connecticut Ave. NW, Washington, D. C.





# WINGS OF YESTERDAY

## 25 Years Ago

According to Post Office Dept., air mail pilots on central division of the transcontinental route, Chicago to Rock Springs, Wyo., had flown 270,000 miles carrying 10,000,000 pieces of mail without a single interruption in operation.

The Dept. of Commerce predicted that by 1933 airplanes would be used for business and pleasure in the U. S. on a scale commensurate with the extension of automobile traffic between 1905 and 1915.

# 10 Years Ago

(In AMERICAN AVIATION)

C. R. Smith, president of American Airlines, marked the 10th year of his connection with that line on Sept. 30, 1938.

On Sept. 22, 1938, Pan American Airways and American Export Airlines, the two U. S. contenders for trans-Atlantic air traffic, signed a 15-year agreement promising cooperation and assigning the geographical areas each would serve.

# FOR SALE By AMERICAN AIRLINES, INC.

43-02 Ditmars Blvd. ASTORIA, L. I., NEW YORK

- Douglas DC-3 Airplane Parts, Accessories and Ground Equipment
- Wright G-102 (C9GB, R-1820) Engine Parts, Accessories and Components
- P&W R-1830-92 Engine Parts, Accessories and Components

#### **ALSO**

- Douglas DC-4 Airplane Parts and Accessories and Ground Equipment
- P&W R-2000-13 (2SD13G) Engine Parts, Accessories and Components (many of which are interchangeable with R-2000-7-9-11 Engines).

These inventories are available for inspection at our warehouses at Astoria, L. I., New York, Tulsa, Oklahoma and Fort Worth, Texas, and offered P.O.B. these points for domestic shipment at very attractive prices.

Prompt attention will be given to all requests for quotations directed to the attention of the Director of Surplus fales at the above address. Write Twiegraph or Telephone (Ravenswood Paul E. Richter, formerly vice president in charge of operations for TWA, was named executive vice president of the company in charge of operations, sales, and accounting departments.

# LETTERS

#### All Is Confusion

To the Editor:

Despite all the talk of the airlines about low load factors they do everything in their power to keep people from buying their services. Today I have been trying to map out a trip to the Southwest. Scheduled changes will be effective Sept. 26 which is four days off. At this time it is impossible to get any information in Washington as to the new schedules of carriers, effective Sept. 26, other than those serving Washington.

It would seem that anyone should know that people must plan trips and know their itineraries. However, the airlines constantly change their schedules and try their best to keep the changes secret. I am confident that if they would remedy this situation by some forethought that it would increase their load factors.

ROBERT ASH Washington, D. C.

#### Communications Cost

To the Editor:

The present financial difficulties of the nation's airlines have been widely advertised. The fact that the airline managements have given serious thought to eliminating the free meal aloft is clear evidence of the low state of affairs. The free meal has long been a mark of distinction of the airlines and its passing would indeed be a sad milestone.

The subject of this letter is, however, a proposal to reduce airline communications costs. The scheduled airlines maintain extensive ground radio facilities for the purpose of maintaining communications with their airplanes while in flight. It is estimated that it costs a large airline between a million and a million and a half dollars per year to operate, maintain, and amortize these ground facilities. It is believed that a major portion of this expense can be eliminated by proper planning and integration of this function now into the Air Traffic Control program outlined in the RTCA SC-31 report published last spring.

SC-31 developed a comprehensive program that will, when successfully completed, give a system of complete and safe air traffic control. The system as proposed is complete in itself. No additional communication or navigational facilities will be needed to provide safe operation of the aircraft. While the voice and visual display communications provided by the SC-31 report are adequate for the air traffic control work, it is not clear that the air-ground communications channel will be adequate or even available for communication between the airline operations offices and their aircraft. This type of communication will still be necessary even with the SC-31 system.

It does not appear however, that the expensive ground radio communication networks now maintained by the airlines can be justified under the new setup. If it cannot, now is the time to do the planning necessary to see that proper provisions are included to give this important function.

It is realized that the suggestion in this letter will not be of any appreciable assistance in the immediate airline financial crisis. The problem of keeping expenses down is an ever present one however, and any method that does promise a lowering of expense without a reduction in the ef-

fectiveness of operation increases the emciency of the business and is to be seriously considered.

B. E. MONTGOMERY Atlanta, Ga.

# BOOKS

AIRCRAFT ENGINES OF THE WORLD, by Paul H. Wilkinson. Published by Paul H. Wilkinson, 225 Varick Street, New York 14

This is the sixth printing of this standard reference on aircraft engines, including reciprocating and jet. The new and enlarged edition contains 320 pages, of which are entirely new, and major revisions have been made to 37 others. Seventy-four pages are devoted to jet engines and gas turbines including 16 completely new specifications. Jet engines of Russian manufacture are included for the first time, are reciprocating engines of Argentins.

acture are included for the first time, as are reciprocating engines of Argentina.

This edition will prove of value to researchers, designers and students. It will also prove of active interest to anyone associated with the technical side of aviation.

# This Air Age

What's Next Dept.: Twenty-five pounds of ordinary river sand, carefully boxed and wrapped, was shipped recently via Northwest Airlines from Japan to New York City so a brick manufacturer who was toying with the idea of setting up a branch plant in Japan could analyze the Japanese sand and its suitability for brick-making.

Bees: United Air Lines has test flown a new lightweight plastic container developed by U. S. Dept. of Agriculture for shipping bee swarms by air. New container reduces mortality and eliminates old pan of sugar used in previous models. Still unsolved is mathematical twister—when bees are shipped by air does total shipment weigh less when the bees are flying around within the containers?

Deer Gift: A tame deer, gift of children of New Jersey to children of Uruguay, was recently flown to Montevideo by Pan American Airways. Other PAA animal passengers have included Canadian bear cubs, monkeys by the hundreds, cattle and race horses by the Clipper load, scores of beavers, mink, and snakes—but never before a deer.

# OBITUARY

#### Raymond Laclerque

Raymond Laclergue, assistant treasurer of Hawaiian Airlines, was drowned Sept. 10 while fishing at Goldendals, Wash. Laclergue was on a vacation trip to mainland United States. He joined Hawaiian Airlines in 1942 and was made assistant treasurer the following year.

CREATIVE ENGINEERING FRÖZÊN STÎFFwithout this miraculous new oil cooler:

In the icy air—up 20,000 feet where the giant Douglas DC-6 flies—oil is kept flowing freely by a wonderful new AiResearch device.

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This AiResearch oil cooler, tailored especially for the DC-6, weighs less than 35 lbs. It keeps oil flowing smoothly no matter how cold or hot flight temperatures become. And a vital element—the atmospheric surge protection valve—eliminates possible failure and assures a constant flow of oil under the most extreme operating conditions.

Now standard equipment on all U. S. planes serving airlines here and abroad, this and other types of AiResearch oil coolers make possible high-altitude flight and extreme high speeds of the new turbo jets.

AiResearch pioneered these oil coolers of weightsaving aluminum instead of heavy copper. And, of utmost importance, AiResearch perfected the exclusive "mechanical joint" construction, so that cleaning and repairs can quickly and easily be done in the field with no sacrifice in performance. Furthermore, to meet rigid Air Force Spec ANC 75, every AiResearch oil cooler design is tested exhaustively in our own extensive laboratories.

• Whatever your field—AiResearch engineers—designers of rotors operating in excess of 100,000 rpm—invite your toughest problems involving high speed wheels. Specialized experience is also available in creating compact turbines and compressors; actuators with high speed rotors; air, gas, and fluid heat exchangers; air pressure, temperature and other automatic controls.

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# Get superior Phillips 66 Aviation products at the

# MUNICIPAL AIRPORT

Springfield, Mo.



# ... the airport with the coveted "SUPERIOR" rating!



Lester Jones, the Airport Manager, has been flying since 1936. He was formerly a Junior Engineer on airport construction with the U. S. Army Engineers. Mr. Jones has been associated with the Springfield Municipal Airport since 1945.

Awarded the honor of "Superior" rating by the AOPA, the Springfield Municipal Airport provides accommodations for three important airlines, as well as complete 24-hour service for private planes and transients.

When you are planning a trip, include the Springfield Municipal Airport on your itinerary. It's a key airport on the new Flyers Skyway No. 1 and a good place to stop for service, repairs, or refueling with Phillips 66 Aviation Gasoline, and has a wonderful coffee shop!

Phillips 66 Aviation products have been used for years by many of the big commercial airlines in the Mid-west. Their use is an endorsement of the quality of Phillips products. So look for the gasoline identified by the Phillips 66 flying shield. This famous trademark is your assurance of dependability. Aviation Dept., Phillips Petroleum Company, Bartlesville, Oklahoma.



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